THE

ADDRESS IN MEDICINE

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BY

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MR. PRESIDENT AND GENTLEMEN,—I deeply feel the honour and responsibility which you have put upon me, by placing me here to-day as your exponent of the present position of Clinical Medicine. My task is difficult from the distinguished character of my audience, and from the imperfections of our knowledge in the subject of which I have to speak. I feel, indeed, as one about to undergo the ordeal by fire, the difficulty and delicacy of my task being so great that I dare not hope to escape adverse criticism.

You have been listening to learned discourses on the physics and physiology of living things, wherein the learned lecturers have been able to instruct and satisfy the mind with details more or less capable of demonstration; whilst I have to admit that my subject lies on the confines of human knowledge, and that too often the highest effort of the clinical student is to arrive at some feeble probability, in the presence of uncertain, or even delusive, evidence.

Clinical Medicine, though a special department of knowledge, is so intimately connected with other sciences, that, when the claims of these are satisfied, it might seem that nothing would remain to it. This appears to me the present error of our schools. It would not, however, be too much to assert that, were it possible to conjoin in one human intelligence all that is now known of other sciences, such knowledge would be compatible with entire ignorance of the department of clinical medicine. As the physiologist must yet assert, that the phenomena of living tissues are not explained by their chemical composition, or, as the chemist himself has equally to admit, that mere isomerism may be no clue to chemical qualities, so the clinical physician knows that the phenomena of disease are not explained by the knowledge of healthy textures, nor by the action of healthy organs. Clinical work is a work by itself; and yet, if I may use the comparison, only so far by itself as one form of organic life may be considered separate from another. It stands apart, but has the most intimate relations to all that surrounds it. It is elucidated by the light of physics, chemistry, and physiology, yet is not comprehended by them as they now stand. In ages gone by Hippocrates had to vindicate the study of disease from the inroads of superstition; at the present day we have to guard it against assaults on the side of science, and need to watch lest we betray it by accepting a too chemical or physical limit to our thoughts.

We should all contemplate with great satisfaction such inroads of the collateral sciences upon medicine, as that at length medicine might have no separate existence; but this consummation appears to be, as yet, far distant, and must be so acknowledged. Happily, such is the extension of the human mind into Nature, that almost daily new regions are discovered; and the boundaries of the old are so extended as to require fresh subdivisions in order to bring them within the domain of thought. Formerly, the physician might have been able to comprehend all that then constituted the allied sciences of medicine; but that can never again be possible. His duty lies, therefore, in giving an exact and scientific character to the department which remains to him,—to investigate its phenomena, with that concentration which is necessary in every physical inquiry, and with all those aids which are afforded in increasing perfection by modern science.

It is not, however, to be overlooked, that even Science herself is apt to have her moments of dogmatism, and, by throwing the light of some particular inquiry full in our eyes, to blind us for the time to that which lies beyond. How often has medicine been thus diverted from her difficult path. A discovery in physics has made us for the moment no more than galvanic batteries, or a discovery in chemistry at another mere oxidising machines. To-day, however, we go to bedside work untrammeled by any exclusive theories of this kind, ready to investigate disease in every way that investigation is yet possible, and forming our judgment in no narrow spirit of a foregone conclusion. We have no system to satisfy; no dogmatic opinions to enforce. We have no ignorance to cloak, for we confess it; but we have to bring into the court of inquiry all possible evidence, and to decide upon it by the light of science and experience. They whose work lies more open to experiment and demonstration are apt to forget the difficulties we have to encounter, and the mental labour required in dealing with them with any measure of success. They would have us postpone these difficulties to a more convenient season, until, by the advancement of other branches of science, they could be undertaken with less risk of failure.

However gratifying and proper this might be, were the end of our knowledge contemplation only, and were there no motives to present action, yet, as we are in the midst of human suffering, and have some knowledge for its relief, it is plainly the duty of some, and worthy of the highest intellects, to apply themselves to this work, even though by so doing they may forego the immediate rewards which pure science so liberally affords.

Whilst thus asking for the unstinted recognition of clinical medicine as a scientific department, I am not forgetful of the obligations imposed upon us, nor that in it there lie problems, as yet, far beyond a scientific solution. No one can hope, even as the sciences now stand, and much less as they shall further advance, to obtain a foremost knowledge of them and of medicine at the same time. Yet such knowledge is to us of daily necessity. We must, therefore, refer our physiological difficulties to the physiologist, and our chemical questions to the chemist, and still admit that there remains an unlimited area of study for us, in tracing the causes and relations, and in recognising the presence, of disease. I would not be understood to say that the physician should neglect the sciences of chemistry and biology, and devote himself to the limited study of morbid phenomena. If any should desire to do so, the attempt would prove its impossibility. The interchangeable relations of things are such as to make necessary the most discursive operation of the mind, if it would successfully inquire into that which is most special. I desire only that that which is our proper work should have our entire energies, strengthened and directed by every collateral aid.

Whilst the biologist traces downwards the relations of the various forms of living things, and, breaking away, one by one, the barriers of separation between them, at length views them all as springing from a common germ, the student of clinical medicine, working in another direction, seeks opposite results. To him, one form of life absorbs and centralises all other forms. His object is to see the facts of human organisation in their most special relations. The very perfection of his work lies in this. It is not even man in general; it is in the individual man upon whom his attention has to concentrate. The stock whence he may have sprung, the circumstances of his birth, the time he may have lived, the diseases he may have undergone, the habits he may have acquired,—are all subjects to be brought into the focus of thought at the bedside, and made to clear up the problem of disease.

Medicine is a specialism; but of no narrow kind. We have to dissect nature; which, for practice, is better than to abstract it.* Every form of life has to us a value, but in an order the reverse of the generalisations of natural history. We desire to know what limits, specialises, and perverts. We study in order to distinguish, and not to classify.

Yet it is not the individual only that we have to isolate for the purposes of clinical study; we have further to inquire into the life of his several organs and tissues. These have each their own life, and, correlative with it, their own tendency to disease, and their specific power and mode of repair. To clinical medicine, therefore, the body becomes a pathological museum. In every part we recognise certain proclivities to morbid action; and the purpose of our study is to trace these tendencies to their source on the one hand, and to their effects on the other. Histology and anatomy are daily widening this fundamental department of medicine; and we may be sanguine that an acquaintance with the morbid changes to which the same parts are liable, where present in the lower animals (comparative pathology), will afford further valuable aid, as by it we shall have in some degree a dynamic test of the general tendency to these morbid states, in addition to that furnished by human pathology. A knowledge of these intrinsic

* Melius autem est naturam secare quam abstrahere.—Bacon: "Novum Organum."

tendencies to pathological change in the several organs prepares us beforehand to recognise their occurrence where, without such knowledge, the signs and symptoms which are present would convey no information. To know, for instance, that the brain, from the early period of adult age, in persons otherwise healthy, is prone, without obvious exciting cause, to the formation of tumour in its substance—to be aware of the probability of insidious *ramollissement* of the central commissures in younger subjects—often enables us to suspect these conditions, and to give weight to what might otherwise seem some unimportant ailment. As I name these two instances, I feel sure your clinical reminiscences will supply the proof of what I state, and read a sad page of suffering, death, and error.

There would appear to be some textures of the body endowed with an almost complete immunity from disease, whilst others are equally liable to it—a difference of which at present we cannot give a sufficient account. Both stand as glaring instances to warn us against the adoption of some of our current theories. There is, perhaps, no part of the body organised for more rapid cell-life, or that is more extensive or more vascular, than the mucous membrane of the jejunum; yet, with the exception of the choleraic and diphtheritic processes, it is almost exempt from primary organic changes—so much so that at the bedside, in considering the probabilities of disease in the abdomen, we have, on the one hand, to exclude this part from our consideration (except in mechanical obstruction), and as necessarily to direct special attention to certain seats of lesion whence the trouble is likely to have sprung. Contrast the limited area presented by the lesser curvature and pyloric region of the stomach, the duodenum, cæcum, and rectum, with the enormous extent of the valvulæ conniventes, and compare the frequency and character of the lesions in the one with those of the others, taken together, and it is obvious how much our diagnosis of abdominal disease depends upon our acquaintance with the tendency of certain textures in the abdomen to morbid changes.

The investigations of morbid anatomy have thrown a flood of light upon the so-called acute idiopathic diseases. Formerly they were supposed to be of common occurrence; and the treatment of the day was adapted to their apparent violence. But how rarely now do we meet with a case of acute inflammation of the membranes of the brain, or of the peritoneum, or, indeed, of any other texture, which we cannot refer to some chronic lesion, or to some distinct cachexia; the only idiopathic part of the case being that which was formerly overlooked or unrecognised—some chronic tissue-change, unnoticed in the storm of acute disease to which it may have given rise.

Oken has said that all the tissues are nervous, and bone is hardened nerve. I shall not discuss this assertion on the present occasion; but, no doubt, modern physiology and pathology are advancing the evidence that whatever is living has nerve-quality in it. The highest expression of this quality is conscious intelligence; the lowest it is, from the nature of the case, at present impossible to mark. This much, however, it appears important to recognise clinically: that morbid brain-force may give rise to a variety of disorders, apparently distinct from their original cause. There is a neuro-pathology from the brain to the tissues, as there is a reverse order of disturbance from the tissues to the brain. If we trace the history of morbid brain-force through the various members of a family, we shall often recognise a great variety of related phenomena, which, in nosological classification, are separated and considered as distinct. The intellectual disturbance in one, may appear as epilepsy in a second; as mere dyspepsia and so-called acidity in a third; in a fourth, as some peculiar neuralgia; in a fifth, if a female, in many varieties of capillary disturbance, as amenorrhœa, vicarious menstruation, hæmatemesis, or even hæmoptysis; in a sixth, some part of the intestinal tract, the colon chiefly, may appear to be the recipient of the morbid nerve-process, and the patient be tortured with fears of a tumour. And a tumour indeed there may be—though a mere phantom, yet calculated to mislead the unwary. Nor does this list exhaust the catalogue of these strange vagaries. It would seem as if sometimes this morbid brain-action expended itself upon the voluntary muscles, which, if of the abdomen, may be shaped into forms that defy diagnosis and bewilder the most cautious.

It might be thought unnecessary for me to point to this strange field of pathology, which has long been recognised as in part connected with hysteria, but I have reason to think our views on the subject are still wanting in distinctness, and that the term hysteria, as now understood, does not include all I here intend. These morbid conditions occur as essentially, if not so frequently, in the male as in the female, though the form of them may be determined by the sex. As if, in different individuals, different portions of grey matter were the seat of the same kind of morbid action; the equivalent of mental disorder in one occurring as colon disorder in another, and so on. And, besides these mere functional disturbances, the history of medicine and my own individual experience supply instances of actual tissue changes which admit of no explanation until thus looked at; and, I need not add, such cases are entirely distinct from feigned and fictitious disorders.

The flatulent dyspepsia of the student, the tears of the distressed, the dry mouth of the anxious, and the jaundice of fright, daily remind us how far the cerebral influence extends, and physiology will hereafter teach us to trace the steps whereby these effects are produced. As there is no explanation of laughter when the axillary nerves are tickled, so there seems to be none of the morbid fears which oppress those who are the subjects of some affections of the colon, and who weary our patience with their doleful complaints. Yet surely we have no more ground to deny the reality of the one than of the other, though we must at present refer both to some ultimate fact of our natural history. "As face answereth to face" by mysterious sympathy, so do these and other peripheral impressions excite or depress, in an equally mysterious way, the subjects of them.

I cannot turn from this hasty glance at the idiopathic pathology of the tissues without mentioning how much clinical medicine has gained by recognising the relations of the tissues to time. The wise man says, "There is a time to be born, and a time to die." What the physiological limit of the latter may be has not been determined, but at the bedside its presence has often to be recognised and distinguished from that of removable or remediable disease.

Abercrombie was amongst the first to point out that the paralytic affections of age were due to senile changes in the tissues; and more recently, the convulsive affections of otherwise healthy, but aged people, have been included in the same category. The epileptic attack of the old man is an evidence of failing power, as his paralytic seizure is an evidence of failing tissue. Though the actively growing organs of the child contrast in a striking manner with the same in decay in the old, there is yet, in some respects, a similarity between the diseases of the two periods of life, like the tints of the rising and the setting sun. In the first period, the organism has not acquired its forces; in the latter period, it is losing them. Infantile convulsions, and senile convulsions; infantile diarrhœa, and senile diarrhœa; infantile eczema, and senile eczema; uric acid deposits in childhood, and uric acid deposits in age, may afford illustration of the truth of my statement.

Time, moreover, acting differently upon different parts of our organism, often performs a kind of pathological dissection, exposing the inherent weakness of entire organs, or parts of them, and giving rise to diseases, for which at present we have often no name but that which designates some prominent symptom. This process of decay, due to time only, occurs at almost every period of life, according to the constitution of the individual. The fatty degeneration of muscular fibre, occurring in the children of certain families, affords such an illustration, and we have yet more striking ones in the progressive muscular atrophy, which occasionally exhibits itself from primary changes in the nervous system, in equally young subjects. Senile changes may thus occur in childhood, as the ephemera is born but for the day. My thoughts have been specially directed to this subject of late, whilst passing in review the facts of locomotor ataxy. The condition of the nervous system which most commonly gives rise to this form of unsteadiness of gait is plainly one of decay, like baldness, or greyness, or the occurrence of the arcus senilis. It occurs to individuals of particular families, in which other forms of nerve-degeneration are prevalent. It happens to be limited almost entirely to males, at the middle or after the middle period of life; and, if we may venture to draw general conclusions from the few observations that have been made post mortem, is connected with fatty degeneration of the posterior columns of the cord; not, however, limited to these, but associated with changes of the like kind in other parts of the cord, and in the brain itself.

My friends, Mr. Lockhart Clarke and Dr. Hughlings Jackson, endorse the opinion first put forward by Duchenne, and subsequently maintained by Trousseau, that this locomotor ataxy is due to disease of the spinal marrow only; but I am disposed to think that they arrived at this opinion against clinical evidence, and partly biased, though unconsciously,

by the way we were first taught to dissect and think about the nervous system.

It is only fair to English pathologists here to state, that this form of disease has long been known to them. Matthew Baillie regarded it as the most common form of paraplegia, and had an anatomical explanation of its peculiarities, which, though certainly not applicable, proves that, with his usual acumen, he had investigated its post-mortem anatomy. His theory was that the malady arose from a morbid effusion of cerebro-spinal fluid, which, when the patient was erect, gravitated into the lower part of the theca vertebralis, and, by pressing upon the cord, rendered the patient unable to steady his movements; whilst, from the same cause, these became free again when he was placed in a recumbent position. I quoted these observations of Baillie in the year 1849, and took occasion then to call the malady encephalic paraplegia. It is probable that this was too restricted a term, as is that of locomotor ataxy; and that in our consideration of the special disease, we must recognise a general diminution of nervous power from failing nutrition, as well as special lines of more unequivocal decay, most marked in the posterior columns of the cord. In support of this opinion I may state that ataxy alone occurred but three times in fifty cases referred to by Trousseau. Notwithstanding this, he draws the characters of the disease which he would typify from three cases, and not from the forty-seven others in which there was evidently disease of parts of the brain, as of the cord. If, however, all that has yet been done still leaves the question of the lesion occasioning this form of paralysis in dispute, one suggestive fact remains—namely, the singular isolation of the posterior columns of the cord by the degenerative process. This fact appears to indicate that the affected structures have their own vitality, and probably, therefore, a separate function from that of adjacent parts. Todd maintained this separate function on other grounds, and concluded that the posterior columns were merely commissures. This theory seems the more probable from the facts now alluded to, inasmuch as textures having such a function may have a lower vitality than others which are more essential. This supposition is strengthened by what is observed under extreme inanition, it having been proved by the well-known experiments of Chossat that the nervous centres resist atrophy more than other tissues. Related to these intrinsic morbid changes, whether local or general, are the cancerous and tubercular affections, and the universal liability of the tissues to that perverted process of nutrition which we call inflammation. Although, for practical purposes, it is convenient to intensify the differences between cancer, tubercle, and the inflammatory process, we have abundant evidence of intimate relations between them. Thus, the children of parents dying of cancer are not rarely tubercular, and those of the third generation are liable to various forms of chronic inflammation; whilst in the same families are healthy individuals, in whom we can discover no evidence of any special morbid tendency. It is not improbable that that which seems most special to us in cancer and tubercle may depend more upon gradation than change of diathesis, and that both are allied to more common degenerations.

In tubercular phthisis this has long been felt and acknowledged. Those who have given most attention to the subject (and I could name no one whose experience would have more weight than that of the late Dr. Addison) have had to confess that the larger their observation, the greater became their difficulty in drawing a line of demarcation, limiting tuberculous from simply inflammatory productions. No doubt many of the errors of prognosis in phthisis, some wilful, some unwitting, arose from assuming a distinction which does not exist, except in extreme cases where, as the logicians would say, the *quantum* passes into the *quale*. Although it has been observed that the scrofulous diathesis of early life may show its special characters in age, still we have, on the other side, frequent proof of a change of diathesis to that which is malignant; and your experience will, I am sure, confirm my statement that the tubercular peritonitis of childhood corresponds with great strictness to the cancerous peritonitis of age. It is probable that cancer is nearer to the simple degradation of tissues than tubercle. It appears to be more independent of an external exciting cause; and although in its structure there is an appearance of vital activity, it has no correlation with healthy organic processes, but is a mere eddying off and separation from the organic cycle. A closer inquiry into the local origin of cancer, and of the mode whereby the system becomes infected by it, are yet desiderata. The tendency to infect the body generally may, after all, not be dependent upon a more marked cancerous diathesis, but upon local circumstances only. Something analogous appears to exist in the infecting and non-infecting chancre; for though, according to some authorities, one is essentially local, and one as essentially infecting, yet it appears certain that even the infecting kind has not always the same infecting power.

In passing from these idiopathic or intrinsic morbid conditions to such as arise from accident or *ab extrâ*, the fevers chiefly claim our notice. In the elucidation of these, small-pox stands for first consideration; since, through vaccination, we have it clearly demonstrated, at least for this one form of fever—and it seems but fair to infer the same of others,—that recovery and subsequent immunity are produced by a process of impregnation and assimilation, and not, as was early believed, and is still by some maintained, of elimination. The old theory of depuration, though true of gross chemical poisons, as lead, or mercury, or arsenic, appears to have no application to those operations which take place in the body, in contagious diseases, as the effect of organic poisons. After any one of these, the organism is not restored to its former condition, as if any poison had simply been cast out; but there is notoriously a residual and permanent effect, which has been induced under the superficial disorder; this effect being shown by permanent indisposition to a repetition of the same morbid process. Unfortunately for science, the phenomena of fermentation have been assumed in explanation of what takes place under these circumstances; and by the theory of zymosis we are carried back to the days of ignorance, when concoction and maturation were made to explain whatever was obscure. We discover, however, at the bedside, nothing in the phenomena of febrile disease proper to zymosis. As well might we call the evolution of the germ after impregnation by such a name. The physiological disturbances induced by any one of the fever-poisons—namely, the excess of heat, the rapid waste, the quick action of the heart, the altered functions of secretion and excretion, &c., the so-called symptoms of the disease—are but the outward effects common to the class, and only so far peculiar to each as they may vary in time and intensity. That which really constitutes the specific character of each is the attendant tissue-change, which when completed according to the special poison, is followed by convalescence.

If this be in any degree an approach to a true conception of these diseases, it follows that the object of medicine must be rather to limit the violence of attendant symptoms, than, with our present knowledge of therapeutics, to aim at arresting or neutralising their specific processes. Had anyone formerly been asked the remedy for small-pox, he would hardly have seriously supposed the answer to be the poison of small-pox itself. Yet so it has proved; and from this experience we have learned that help may come precisely in the opposite direction to that looked for in our theories, and we obtain a striking proof of the truth of Bacon's aphorism, "Natura non nisi parendo vincitur."

Yet, notwithstanding this teaching, pathology still persists in looking in another direction; and therapeutics are governed by the idea that disease is an entity which must be combated and cast out. I fancy that the habit of calling these and similar affections blood diseases insensibly fosters the idea of depuration. Now, though I am not disposed to stir up a discussion between *solidism* and *humoralism*, I cannot but express my conviction that the susceptibility to the various contagious fevers no way lies in the blood, except so far as this may be a channel through which the poisons reach the tissues; and that it is in these, and especially in the nervous tissues, that the true fever processes begin and end. The facts of habit, such as that of taking opium or using tobacco, the facts of acclimatisation, and of the commoner experience of our life, whereby the nervous system becomes accustomed and indifferent to continued sources of irritation, render such an opinion the more probable; and a confirmation of it is gained by that enduring effect which ensures against a repetition of morbid actions.

Were I to give liberty to my imagination, I might perhaps trace here a much more extensive law of our nervous organisation, whereby that which is new excites, and that which is old becomes indifferent. For my own part, the views which have been put forth as to syphilisation have, on these grounds, seemed to deserve the fullest consideration; and, though I have not experience to set against the adverse conclusions of some who have made the subject a matter of experimental inquiry, I feel that we cannot set aside the more extensive experience of those who have asserted its success.

I cannot conclude these general remarks on some difficulties which now occupy our minds in respect to pathology without alluding to the vexed question of rheumatic fever. Is this

state due, or is it not, to a *materies morbi*? Further, have we any grounds for assuming that such *materies morbi* is lactic or acetic acid? I put these questions thus explicitly, because it seems to have been settled, upon mere authority, that they may both be answered in the affirmative. I say authority alone, not forgetting the experiments which have been made on animals in proof of this theory, since such experiments appear to me to prove only this, that the acids named, entering the blood, may cause endocarditis and some other pathological changes simulating those of rheumatism; but I cannot recognise in them the rheumatic state, as I am acquainted with it at the bedside. There are, so far as I know, no analyses of the blood in rheumatism which show that it differs from normal blood in respect of its acidity. The theory of an acid *materies morbi* appears to be supported chiefly upon the excessively acid secretion of the skin in this disease, and the increased acidity of the urine. But neither of these can be considered in any degree characteristic; for not only in the worst forms of the rheumatic process is the secretion of the skin not acid, but alkaline, but in conditions of the system totally dissimilar from rheumatism—as, for instance, in phlebitis, and especially in that form following injuries to the head, as well as in arterial embolism—we often meet with excessive acid sweating, misleading to a false diagnosis those who believe this to be characteristic of rheumatism. Notoriously, a proper function of the skin is to secrete, and probably to form in itself, lactic and acetic acid. Under different kinds of irritation this becomes excessive; but I know of no facts to show that this excess indicates a special pathology, or may be regarded as a salutary process, whereby the system is relieved of a *materies morbi*. In so supposing it, we seem to be misled by the same fallacies as, before the time of Sydenham, misled practitioners in the treatment of eruptive diseases. I confess to a strong sympathy with those errors; and, though my reason is convinced that they were errors of the most dangerous kind, I cannot but excuse them, and admire the genius and courage of Sydenham, which enabled him to detect and correct them.

If, failing the evidence of the cutaneous secretion, the rheumatologist adduces proof of an acid diathesis from the character of the urine, must not the force of his argument be abated by the admission that urates replace urea in a large number of other morbid conditions, so that we cannot attach any specific value to this fact, the general significance of which will be better appreciated by the physiologist, who will see in the presence of uric acid and the urates a debased condition of organic waste, common to the life of inferior organisms?

To pass, however, from these desultory observations, which the present position of pathology has suggested, the subject of diagnosis claims a few words. We must all admit that diagnosis ultimately rests upon an exhaustive pathology. Without a knowledge of what is possible in disease, diagnosis must be defective, and is, therefore, in that degree defective at the present day, since it is plain that we are unacquainted with many pathological states, if, indeed, we be fully acquainted with any. Moreover, a knowledge which might seem exhaustive to-day, might, by the changing circumstances of the world, be defective to-morrow. Without raising the question, whether disease has within historical periods changed its type, it may be maintained, as was long ago pointed out, that the pathological tendencies of the body do vary with the genius anni, as witness the changes in epidemic disease. Within our present experience, cholera has afforded us new pathological questions, which are not yet solved; and strangely, side by side with it—to make the contrast more impressive—diphtheria has revived; laying before us, as if to teach us how feeble our pathological science is, two opposite conditions: two diseased mucous surfaces—one digestive, one respiratory—from the former of which, by mysterious inversion of its normal forces, the salines and water of the blood may be fatally diffused, and from the latter, as by a kind of morbid polarity, the fibrine only is poured out.

Although the perfection of diagnosis cannot be reached till we have a perfect pathology, we have to confess that it falls behind the pathological knowledge we at present possess, as the revelations of the post-mortem tables abundantly confirm.

And this brings me to the second principle of diagnosis, a knowledge of the probable in disease. Of this, experience alone can inform us, and experience of the most varied kind. But when so varied, and supported by a large knowledge of pathology, it often enables us, as by prophetic insight, to diagnosticate conditions, which neither direct physical examination, nor the most systematic arrangement of symptoms, could explain. These suggestions are amongst the best fruits of experience—of that experience which is able to anticipate causes, and from causes their effect. The advancement of diagnosis depends upon the capacity of medicine to make these anticipations with increasing certainty, which, though *anticipationes mentis*, are truly *interpretationes naturæ*. To illustrate these remarks, what could I better quote than the clinical history of thrombosis and embolism? What mysterious obscurity, until recently, involved the phenomena of which embolism was the cause; but, thanks to Kirkes and Virchow, when once the pregnant fact of embolism in vein or artery is recognised, not only present facts arrange themselves in order, but we are able to anticipate the possible occurrence of others, and, by anticipation, often to prevent them. Symptoms and physical signs may supply us with abundance of clinical facts; but, until the one great fact be recognised in such cases, we can make no step in diagnosis.

Nor does this instance by any means stand alone; for wherever, from the nature of the case, we are unable to make a complete physical examination, as must occur in diseases of the brain, and as often occurs in diseases of the abdomen, pathological inference, or pathological anticipation, has to supply a meaning to other portions of the evidence. In brain diseases, this method of interpretation comes largely into play; and the neglect of it has much to do with the obscurity in which, at the bedside, these diseases are still involved. It is often impossible to form any opinion whatever of the malady under which a patient with brain disease may be labouring, from an inquiry however acute, and however complete, into the mere statical facts, as they at the moment present themselves. The attempt to do so is perhaps more likely to lead to error than to truth; a fact which, if I be right in the statement of it, shows of how little value mere symptoms are in the diagnosis of such diseases.

Abercrombie felt this to its full extent, and one of the objects of his treatise on cerebral disease was to make it clear, and to warn us against future attempts in that direction. A perusal of his writings will leave upon the mind the impression that the most diverse affections of the brain may, at the bedside, present the same symptoms; that in the most extensive lesions there may be none at all; or that the whole catalogue of symptoms may appear without any lesion. But the feeling of despair which such a perusal formerly induced is now in great part dissipated by the success with which the inquiry can be made in the direction pointed out. Admitting that we shall never diagnosticate cerebral lesions by their symptoms; partly, because different lesions may produce the same symptoms if the seat be the same; partly because there appear to be surplusage portions of brain-tissue, as in the hemispheres, where lesions cannot make their presence known; and partly because in that monster disturbance epilepsy, we may have a variety of states simulating organic lesion,—we betake ourselves again with renewed energy to the study of morbid anatomy and pathology, which first caused the confusion by disturbing our ignorance, feeling assured they will at last afford us a full clue to the difficulty. To a large extent they have already afforded this clue. To begin with the last fallacy I have named, I may remark that we are better acquainted than formerly with the various forms of the epileptic state. A better pathology has prepared us to recognise in this condition a great variety of effects. Todd drew attention to epileptic hemiplegia; and in the same subjects there occurs also a remarkable form of coma, which has often led to the supposition of effused blood, or tumour, or abscess—suppositions which have been falsified by the recovery of the patient. Whilst our notion of epilepsy included nothing more than a convulsive state with unconsciousness, numerous errors in diagnosis must have occurred from this source alone. It now represents to us a condition of nerve-force, in which may occur not only the common phenomena of epilepsy, but coma without convulsion; paralysis following convulsion; sudden and transient mania, or an approach to it; as well as, according to Trousseau, some strange forms of neuralgia. A knowledge, therefore, that a patient is liable to epilepsy, or comes of a family in which such a state has directly or indirectly occurred, must make us pause in our diagnosis, and thus save us from a precipitate or erroneous conclusion. The proneness of the aged to epilepsy is a fact probably not sufficiently borne in mind in the diagnosis of these cerebral disorders. As to the second fallacy, when disease is situated in what may perhaps be called, without misuse of the term, the surplusage portion of the cerebrum or cerebellum, we are often led to suspect its presence, and as often correctly to infer its nature (and avoid the third fallacy), from a knowledge of the fact of surplusage, and of what is probable under collateral circumstances, though the symptoms of organic disease may be apparently of an insignificant kind. For instance, headache with occasional bilious vomiting in a young and healthy adult—tumour; (!) the same symptoms, with chronic suppuration about the ear, or in some distant part—abscess; (!) nearly the same symptoms, with

syphilitic cachexia—syphilitic affection of the brain. (!) This is the merest outline, but the drawing is true to nature. May I say, once for all, that any peculiar shape of head, large or small, has, like the epileptic brain, long been admitted to defy diagnosis. Further, how much have we not gained in the diagnosis of cerebral disease by the known tendency of renal cachexia to induce chronic or subacute cerebritis, and of embolism to cause plugging of the vessels?

In turning from the diseases of the brain to affections of the chest, we find that we are here able to combine our knowledge of the possible and the probable with direct physical signs; and consequently the diagnosis of chest-affections has very steadily advanced. Old errors, however, still linger even here, and a true dynamic estimate of lung-lesions is yet a desideratum. This must be supplied by improved interpretation of physical signs through attendant physiological conditions. The word phthisis, which has now too often a specific value, will dilate so as to include a whole genus of chronic affections, which, when duly recognised and classified, will afford more secure grounds of prognosis, and spare us the perusal of worthless records of so-called consumption cured.

In the diagnosis of abdominal diseases, we want an increase in the number of our more cardinal facts; such facts, for instance, as that the enlarged gall-bladder changes its shape under contraction; or that of the two characteristic notches in an enlarged spleen; or that of the peculiar position of the colon in enlarged kidney, &c. At present our diagnosis is mostly one of inference, from our knowledge of the liability of the several organs to particular lesions; thus we avoid the error of supposing the presence of mesenteric disease in young women emaciated to the last degree through hysteric apepsia, by our knowledge of the latter affection, and by the absence of tubercular disease elsewhere. We infer alcoholic changes in the liver from the aspect of the face, mottled by venous stigmata and the yellowish conjunctiva, even without any direct knowledge of the state of the liver, or the habits of the patient. We suspect a cancerous disease of the peritoneum in the aged from the pain with effusion. It is obviously from the perfection of physical diagnosis, aided by pathology, that we must look for the advancement of medicine. The feelings of the patient, so-called symptoms, are of little value taken by themselves; often, in fact, their mere number and variety are a proof of the absence of disease, and it is admitted that they always need interpretation through physical inquiry.

The eye, the ear, the touch—and chemistry replacing the other two senses,—are impressed into our daily service, and we may hope that what the ophthalmoscope has effected for the eye, these other means may do for other parts. To chemistry we owe much, but there are two wants we ought to express. We want analyses of the *residuum* of the urine, especially in disease, in which we may hope to discover new elements for diagnosis; and we further want ready clinical means for recognising what has been discovered by more elaborate processes. Our hope in the direction of chemistry ought to be unlimited, seeing that changes in the urine must correspond to intimate changes in the organs and textures.

To return, however, to physical diagnosis; the fidelity with which the characters of a disease are often marked in its tissue changes must excite equally our wonder and attention. It may be no more than the tint of the morbidly vascular part—a condition apparently the most trivial and accidental; and yet it returns with unerring certainty under the like conditions, as our guide to diagnosis. The multiplied generations of the vaccine vesicle from one lymph, maintaining to this day, in all respects, the characteristics of that which first arose under the hand of its immortal discoverer, is one of the strongest evidences that I could adduce of such fidelity, and may well encourage us to the investigation of physical signs as an evidence of the pathological causes to which they are due.

But our diagnosis is not always of a single morbid state. There may be grafted upon some special diathesis, as of tubercle or of gout, the effects of alcohol, syphilis, mercury or miasm. No doubt even more complicated instances could be given, but this will suffice to show the character our diagnosis must take before we can proceed to treatment.

As health is our object, or as near an approach to it as circumstances admit, *hygiene* and *therapeutics* claim the last and highest place in our thoughts. Happily, at length, hygiene has gained strength enough to maintain an independent vitality as a science. To know and counteract the causes of disease before they become effective is evidently the triumph of our art; but it will be long before mankind will be wise enough to accept the aid we could give them in this direction. Ignorance of the laws of health and intemperance of all kinds are too powerful for us. Still we shall continue to wage against them an undying crusade; and truly we may to-day congratulate ourselves that no crusade ever called forth more able and devoted warriors than are engaged in this.

The diseases of the young are in large part preventable diseases.

Epidemics carry off in great proportion the healthy members of a community.

It is futile, if not worse, to speak as some do of leaving diseases to work out their own ends, as agents of a moral police. Medicine allows no such prerogative to our judgment. It is enough for us that diseases prevail, to stimulate our best efforts for their prevention, without our asking a question beyond.

Nothing can stimulate science more to the investigation of therapeutics than the feeling that the diseases calling for treatment prevail in spite of our best efforts to prevent them. Where hygiene fails, properly commences the work of therapeutics; but it is painful to find ourselves occupied in making feeble and often useless efforts to combat the effects of a poison which might perhaps have been stamped out in its beginnings.

The strength of modern therapeutics lies in the clearer perception than formerly of the great truth that diseases are but perverted life-processes, and have for their natural history not only a beginning, but equally a period of culmination and decline.

In *common* inflammatory affections, this is now admitted to be the all but universal law. By time and rest, that innate *vis medicatrix*,

> "Which hath an operation more divine
> Than breath or pen can give expression to,"

reduces the perversions back again to the physiological limits, and health is restored. To this beneficent law we owe the maintenance of the form and beauty of our race in the presence of all that tends to spoil and degrade it. We cannot pass through the crowded streets and alleys of our cities without recognising proofs of this in the children's faces, in spite of all their squalor and misery; and, when we remember what this illustration is all its details reveals, we may well take heart, even where our work seems most hopeless. The effects of disease may be for a third or fourth generation, but the laws of health are for a thousand. Bearing this in mind, I have often had occasion to remark in practice how little we can estimate the reparative powers, however able we may be to discover diseases. This is, perhaps, never more striking than in some chronic affections, which, having resisted all our efforts at cure, may have been abandoned in despair, or at length placed under some indifferent treatment. Under these circumstances, with what interest have most of us day by day watched the lessening deviations of disease, until the balance of health has been again all but restored, unstable though the equilibrium thus gained may, from the nature of the case, have been.

Therapeutics were at one time directed only by two ideas—of *strength* and of *weakness*. *Sthenic* and *asthenic* expressed in general terms the morbid conditions requiring treatment. Of the same import, but of older date, were the thoughts derived from the then current theory of *phlogiston*; and the terms *phlogistic* and *anti-phlogistic* still linger in medical treatises. From a better physiology, however, we have learnt that perverted functions in disease, however exaggerated, are due to failure, and not to excess of the vital powers.

Organic strength lies nowhere but in the vital circle of nutrition and function.

A rapid pulse and active delirium, like the increase of the animal heat, are signs of deficient *balance-power*—a power which we have been so slow to recognise in living organisms, that we have not yet an accepted expression for it. How different seems to us at the present day the value of the symptoms which were formerly considered indicative of strength.

In an increase of temperature we see but increased waste. Every degree of rise in the thermometer, indicates to us a corresponding decline in that nervous control which regulates the functions in health; and this decline is the more important, if it be true in complex organisms, as it is in simple machines, that this combination which limits the mere working forces is the highest and most characteristic. The terms "strength" and "weakness," are valueless, as expressive of conditions so complicated as those of disease. They are deduced for the most part from the feelings of the patient, and a few superficial phenomena. They are empty idols, impressive only by the extent of their emptiness. Surgical treatment was greatly advanced by the imaginary discovery of the *sympathetic powder*, which being placed upon the instrument inflicting the wound, the injured part, by time and rest, was allowed to recover under the simplest means. We need now to import into medicine a large

part of the best surgical principles so deduced. The surgeon is contented to place a wounded part under the conditions of physical and physiological rest, and after attention to hygienic conditions, the *res non naturales* of our forefathers, to abide the result. This, no doubt, expresses the largest part of our treatment of common acute disease. We now know that we cannot directly control the morbid processes in pneumonia, pleurisy, or pericarditis; we know further that the means formerly considered essential to the cure of these diseases, tested by better clinical observations, were either useless or pernicious; that instead of favouring the plastic processes in inflammation, whereby the normal decline of the disease was promoted, the effused material was often more or less degraded and spoilt by the treatment employed, and remained in the affected parts, either as a foreign body, or in different degrees approaching thereto.

And this must always have been so, had we continued to regard these effusions as simply foreign products; but as soon as we perceived their physiological relations, and that they had a life like the tissues from which they sprang, they took a different aspect, and it became our duty, often without much interference, to stand by, and watch this course to the end. With an audience like the present, so capable of supplying the proper safeguards to these expressions, I am not likely to be misunderstood, as if the duties of the physician were of a negative kind. There is a sufficient sphere for our activity, in ways too numerous for me to mention: in the relief of symptoms where the lesion may be left to its natural course—in the treatment of the lesion itself, where we have means adapted to it, and of these we have many—in maintaining the health when the degeneration or lesion is incurable. Time would fail me, if it were otherwise proper in this place, to enumerate and enlarge upon the valuable applications of medicine. The discovery of disease—the alleviation of its symptoms—the obviating its inroads—the placing our patient under favourable conditions to bear it—the guarding him against what would be injurious—and the administration of remedies often in themselves effectual for its removal—are surely services of no unimportant kind.

There is probably no human work which daily confers greater good upon society than does ours; and when we consider that from the ranks of our profession the chief cultivators of modern sciences have sprung, whether we speak of botany, comparative anatomy, chemistry, physiology, biology, hygiene, or social science, we may feel some justifiable pride and be encouraged in spite of all failures to go on, assured that our future must be one of ever-increasing usefulness and honour.

THE

ADDRESS IN PHYSIOLOGY

DELIVERED BEFORE

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, AT OXFORD,

BY

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MR. PRESIDENT AND GENTLEMEN,—I hope that you may think that the fact of my local connexion having put me into the honourable office of giving this address, justifies me in adopting for it an arrangement, and choosing for it a set of topics which that local position suggested to me. If I were to say that I had chosen for the subject of my address the bearings of the studies which it is the business of my life to teach here upon the interests of the Medical Profession, I should be giving my address too ambitious a title; it is but with some, and with few, of those bearings that I propose or feel myself competent to deal. I shall limit myself firstly by selecting only such topics as, having been pressed forcibly upon my own attention in my own peculiar course of labour, have come to assume in my own eyes at least a considerable importance, and have seemed in consequence not unlikely to prove possessed of interest for others also; and I shall limit myself secondly by abstaining from going over ground which has within my own knowledge been occupied by persons who have on previous occasions stood in the position which I now occupy before you.

Let me then throw the heads of my address into a few short phrases, and say that I propose, with your permission, to speak firstly of the bearing of certain portions of the very extensive range of subjects comprised under the titles Anatomy and Physiology, upon certain points and problems which come before the attention of the Medical Practitioner in the course of his actual duties; and secondly, of the illustration which some of the conclusions recently come to in Biological science cast upon the validity of certain principles which are ordinarily looked upon as authoritative canons for the regulation of the reason in medical, and, indeed, in other investigations. Under the term biological science is included besides pure physiology, human and microscopic anatomy, comparative anatomy also; and in this place, as your visit to the museum will have convinced you, we give considerable, but, as we hope, not undue prominence to this latter branch of study. I purpose to speak of the bearings of biology on medicine in each, but, owing to our local speciality just alluded to, specially in the last-mentioned of these four departments. And I must ask you to bear in mind that the very constant reference which I shall make, if not in my address, at all events in my notes, to the works and writings of others, is in like manner to be explained by my wish to have a distinctive colouring given to this address by the local peculiarities of the great educational centre in which we are assembled. For one of the most distinctive peculiarities of this ancient university is the formation within its precincts of such a library of modern science as will shortly have no superior, and but few rivals, in the world. This we owe to the well-advised administration of the funds of that famous physician, Dr. Radcliffe; and it is from a wish to make a sort of acknowledgment of the obligation which medical and other sciences owe to him and his trustees that I shall so constantly, at least in print, refer to the chapters and pages of the innumerable books which their enlightened munificence has put here at the disposal of the student. It is not, I can assure myself, from any irritable anxiety to impugn or depreciate the worth of others that I have so constantly consulted and specified their pages; nor, I trust, have I allowed myself to be tempted into the unpardonable fault of using, or rather abusing, a great opportunity, by making upon it a petty personal display. Rather have I felt it to be my duty to occupy this hour as you occupy your lives, in doing what it may be possible to do for the good of humanity. Your presence and your example make me feel that any other course would be but impertinence; and I have, therefore, kept constantly before my eyes Bacon's sentence in condemnation of a parade of empty, useless erudition:—"Vana est omnis eruditionis ostentatio nisi utilem operam secum ducat."

The title of Niemeyer's work on medicine, the seventh edition of which has recently appeared and come into my hands, will furnish me with an excellent text for my first head—"The Connection and Interdependence of Medicine and Physiology." That title runs thus:—"Lehrbuch der Speciellen Pathologie und Therapie mit besonderer Rucksicht auf Physiologie und Pathologische Anatomie, von Dr. Felix v. Niemeyer. Siebente Vielfach vermehrte und Verbesserte Auflage. Berlin, 1868." From this work I will take my first illustration of the nexus and connexion of which I have to speak; and I believe that though I am obliged to dissent from the explanation therein given of the facts I shall refer to from its pages, the explanation which they seem to me to lead or rather demand, shows even more clearly than the one there given, the intimacy of the alliance which is now becoming so close between the experimentalist and the practitioner. In writing (Vol. ii. p. 334) of a form of neuralgia, the pain of which those who have suffered from it themselves, or indeed have even seen others suffering from it, will allow is not exaggerated by the application to it of the words, "fast unertragliche," Niemeyer remarks that the physiologists, Dubois-Reymond and Dr. Möllendorff, refer its origin to the existence of a dilated state of the arteria carotis cerebralis. This state of dilatation these authors explain by a reference to certain facts in the physiology of the cervical sympathetic as discovered now some seventeen years ago by Bernard, and elucidated still further by Waller, Budge, and Brown-Séquard. And in a like spirit, or at least by a reference to certain anatomical facts in the arrangement of bloodvessels, which he supposes to become dilated and distended, the great Göttingen anatomist, Henle (cited by Niemeyer ii. 319-339), explains the causation of certain neuralgiæ. The neuralgia which is so apt to haunt the sixth, seventh, and eighth intercostal spaces of the left side, he has suggested may be explained by the peculiar arrangement of the left or smaller azygos vein in that region; and the greater relative frequency of neuralgia of the first than of the second and third divisions of the fifth cerebral nerve, he refers to the greater quantity of

dilatable veins with which it is beset in passing from the inner to the outer surface of the sphenoid. Now I venture, though with some diffidence, as I find myself in opposition to such names and authorities, to dissent from the explanations there given of these facts, which I suppose must be acknowledged, with perhaps an exception as to the relative statistical frequency of neuralgia of the first division of the fifth, to be only too real facts. By laying the physiology of the cervical sympathetic alongside of the natural history of an attack of neuralgia, we shall be enabled, I believe, to see that there are stages in each corresponding with stages in the other, but that it is a stage of spasm in the one, and not a stage of relaxation and congestion, which corresponds with the stage of pain in the other. Stimulation of the upper cervical sympathetic produces more or less immediately contraction of the bloodvessels of the head and dilatation of the pupil, and diminution of the temperature. This is its first line of operation, resulting in what Brown-Séquard ("Lectures, Phys. and Patho. of the Nervous System," 1860, p. 142) calls "Decrease of Vital Properties." But after a while the reverse of all this takes place, and the vessels dilate. Now whether this be so in consequence of exhaustion, as is ordinarily said (Funke, *e.g.*, "Physiologie" ii. 772), or not; as Dr. Loven, who says (Ludwig's "Arbeiten, Phys. Anstalt," Leipzig, 1869, p. 1011) that the sympathetic is not so easily tired, thinks is of no consequence, or little consequence, as the fact of the sequence of events is accepted as I have stated it on all hands. Indeed, similar alternations of alteration in the calibre of vessels take place, as is well known, in the calibre of vessels "spontaneously," as the phrase goes, and, whether rhythmically or not, still chronometrically in relation to the needs of the animal and its tissue, in the arteries of the rabbit's ear, (Funke, l. c. ii, 771, citing Schiff and Callenfels,) in the veins of the bat's wing (Wharton Jones, Phil. Trans. 1852), in the arteries of the frog's web (Lister Phil. Trans. 1858, p. 653.) And the occurrence of these latter alternations makes the occurrence of the former more intelligible. Now a similar alternation from a stage of contraction of bloodvessels, of coldness of skin, of shivering, of total absence of heat, redness, swelling, or tenderness, to one of increased circulation, swelling, heat, and tenderness, constitutes two stages in an attack of neuralgia, homologous with the two described as occurring in irritation of the sympathetic. It is rare, I believe and Dr. Anstie teaches (Stimulants and Narcotics) for pain, as opposed to tenderness, to persist after congestion; and pain in tissues differs as much from tenderness as remorse in a conscience differs from tenderness in that organization, and the two things are well nigh equally exclusive the one of the other in both cases. Perhaps the mere apposition of the two sets of occurrences side by side, is sufficient to justify my conclusion that the congestive stage of the physiological experiment is not the homologue of the painful one of the morbid history, mere apposition being sometimes sufficient to decide us on more difficult homologies, at least in the negative. But I may add that the argument from the *juvantia ad lædentia*, as the older physicians and physiologists phrased it, gives some confirmation to the view which teaches that spasm and starvation go in company with pain; relaxation and congestion only with tenderness. I will put the facts before you as premises, you will piece them together into an argument for yourselves. Chloroform is the greatest of *juvantia* in neuralgia; chloroform, indeed, and æther in equal parts, as recommended by Mr. R. Ellis, may be safely entrusted to a safe person for self-administration; and if taken persistently as well as prudently, may keep the attack in suspense until the enemy from weariness or chronometric obligations, retracts or withdraws. But this great reducer of neuralgia, this great and blessed producer of "indolence" as Locke called it, is also the great reducer of muscular spasm, as we know from its action and our employment of it in cases of hernia, and indeed of tetanus. Now, if it relaxes muscles which we can see in the limbs and trunk without the aid of a microscope, we may think it not improbable that it will do the like by muscles which we cannot see without the aid of that instrument in the arterioles. Chloroform, secondly,* has the reverse action to that of the sympathetic in dilating the bloodvessels of the head, as indeed also has alcohol, itself too a producer, though less directly, of the "indolence" we desire, as well as of much that we deprecate. And chloroform, thirdly, antagonizes the sympathetic in its very obvious action on the pupil.

It may be bold in me to venture further in this direction, yet as a member of the British Medical Association, and as a reader of our admirable journal, I may perhaps be allowed to say, before I return to my own more immediate subjects, that the account given by Dr. George Johnson in March 21, 1868, number of that periodical, seems to me to indicate that epilepsy itself is but a frightful caricature of neuralgia and of the results of vaso-motor irritation and contraction. The presence of dilatation of the pupil in all three sets of cases may be thought perhaps but a slight indication in the direction of identity of cause. High spirits and great vivacity are not rarely in both the two diseases alike precursors of an attack, whilst counter-irritation, which both Schiff and Setschenow* are agreed for once in considering a strong and universal reflex depressant, is not rarely in both diseases alike, both, *ex hypothesi*, dependent on reflex vascular contraction, a preventive.†

I will now proceed to give, in the second place, an account of a physiological experiment worked out for us from time to time in the laboratory of nature, which throws not a little light on a question which I learn from Dr. Wilson Fox's work on "Dyspepsia," p. 141, is still a matter of debate among pathologists; the question, to wit, of the influence of periosteal innervation in causing inflammatory or sometimes even still severer morbid changes.‡

It is well known that stags after injury to the testes, have corresponding changes wrought out in the corresponding horns. Such a specimen I can show you from the Christ church Museum, founded by Dr. Matthew Lee, in a curious old work dedicated to him, in company with two others of the King's physicians, by Dr. Richard Russell,§ and styled "The Economy of Nature in Acute and Chronical Diseases of the Glands," p. 21—24. Five such experiments are recorded.

In such cases as these, after the injury to the testes, the horn may or may not itself be shed annually, but it never thenceforward loses its "velvet," and it never becomes the dry lowly vascular weapon of offence, which in a fortnight or three weeks from the

* I find that both Mr. Durham, "Guy's Hospital Reports," 3d. vi. 1860, p. 153, and Hammond, "On Wakefulness," p. 25, are agreed, that in animals under chloroform, the veins of the brain become distended. I do not, however, lay any great stress on this fact; firstly, because the veins may become distended under the influence, not so much of the chloroform, as of the more or less partial hindrance to respiration which its inhalation implies; and secondly, because we have as yet (Funke, ii. 769, 773) no very distinct evidence for the production of effects on the veins by the sympathetic. But, taking the facts as given, we must allow that venous fulness, though inferior doubtless to arterial repletishment, is still, as the growing prostate of the aged, the rank hairs shooting up round old ulcers, and the cock's spur transplanted to the cock's scesob show, a more or less favourable condition for growth and nutrition. Whereas pain is correlated always with mal-nutrition, and ordinarily with atrophy, and is now always spoken of as a "depression" rather than as an "exaltation of function."

* Setschenow's words are these ("Neue Versuche," p. 23, 1864): "Es giebt endlich bei meinen Gegnern einen Versuche, an dessen Richtigkeit ich keinen grund zu zweifeln habe, in welchen die einseitige Trigeminus Reizung eine starke allgemeine Reflex Depression hervor rief." These words seem to furnish something like a rationale of the picking of the nose in helminthiasis, as also of much of that counter irritation of the fifth nerve at its periphery, which so-called "nervous irritable" persons practise on themselves in the way of "tricks."

† These views I came to entertain without any knowledge, or perhaps I should rather say without any conscious recollection of those which Dr. Radcliffe had put before the world in his lectures delivered at the College of Physicians, and published in 1854 in his work on "Epilepsy, Pain, and Paralysis." I have not altered what I had written in consequence of my consultation of this most valuable work, to which I resorted after seeing a reference to it in Dr. Anstie's book. This latter work I have already quoted in the text, and I found it most useful and suggestive to me. I believe, indeed I hope, that what I have written is more or less in accordance with Dr. Radcliffe's views. But it is as much inferior for purposes of consultation, and indeed in other points of view also, to what Dr. Radcliffe has written, and I have read of his, on the same subject, as a skull when just removed, and that in a somewhat fragmentary condition, from a barrow, is to the same skull when pieced together and reconstructed, as you may see many such skulls in the Museum, by Mr. Robertson.

‡ The following references to authorities on this vexed question I herewith append:—Lister, Phil. Trans. 1858, p. 627. Beale, Phil. Trans. 1865, Part I. p. 447. Virchow, Archiv, vol. xvi. 1859, p. 428. Coll. Path., Chirur. Trans. pp. 311, 312. Paget's Surgical Pathology, Ed. Turner, p. 237. British Medical Journal, 1866, p. 402. Anstie, Lancet, 1866, ii. 548. Simon, Holmes' Syst. Surg., i. p. 62. Bernard, Leçons Phys. Path. Syst. Med. ii. 518. Brown-Séquard, Lect. Phys. Path. Nerv. Syst., p. 143. Budge, Physiologie Handbuch, p. 794. Funke, Physiolog. Handbuch, ii. 776. Donder's Spec. Physiologie, p. 140. Billroth, Die Allgemeine Chirurgische Pathologie und Therapie, 1868, p. 72. Niemeyer, Lehrbuch Path. und Therap. 1868, ii. pp. 320, 340, 428. Handfield Jones, Functional Nervous Disorders, p. 11. and Lectures in Med. Times and Gazette, 1865. Samuel. Moleschott's Untersuchungen, Bd. ix. 18.

§ It may be interesting to record here, in passing, that Dr. Richard Russell lived at Reading, that he was a friend of Dr. Chapman and of Dr. Frewin, of this very place, and that the copy of his work which I have referred to, and which exists in the Christchurch Scientific Library, attached to the Christchurch Museum, and deposited with it in the University Museum Building, did in 1760, eleven years before Dr. Russell's death, belong to Dr. Chapman. Now these facts and dates render it not improbable that this very specimen may have been given by Dr. Russell to Dr. Chapman, possibly together with this copy of his book. It is unfortunate that so much should be left to speculation, but this digression may be justified by the moral which it conveys, to the effect that we are bound when receiving a specimen into a museum, to put on record forthwith, for the benefit of our successors, a note of its history and donor. Dr. Russell was the author of several other works besides the one I have quoted. Their existence has escaped the notice of Dr. Munk in his interesting volumes, "The Roll of Royal College of Physicians," vol. ii. p. 132. Their titles are, 1. "De Tabes Glandulari sive de usu aquæ marinæ in Morbis Glandularum Dissertatio." In 1 vol. 8vo. Pret. 5s. 2. "A Dissertation concerning the Use of Sea-water in Diseases of the Glands; to which is added an Epistolary Dissertation to Dr. Frewin, M.D." In 1 vol. 8vo. Price 5s.

present time we shall see the bucks polishing their hard leather-coated horns into against shrubs and trees. It remains vascular and spongy within, and coated with hairy skin outside, which may be prolonged into pendulous outgrowths. Being sensitive and fragile, and bleeding easily, it acts as a second sexual disqualification; and as I am speaking of this correlation of growth, I may be allowed to add that its reality is further testified to by its absence after similar lesions in reindeer, where both bucks and does are alike horned. Now I submit that a unilateral correspondence of mal-nutrition such as we have here, is as good an instance and exemplification of Flüger's first law of Reflex Action, the law of unilateral (gleichseitig) transmission of stimulus, as any unilateral or *homo*lateral twitching of any muscle can be in response to any one-sided stimulus. Only the reflex action shows itself in the way of nutrition, a sort of reversed hemiplegic nutrition it is true, and not in that of movement nor in that of secretion.* Let me, as in the former case, lay alongside of this physiological experiment a parallel to it from pathology. This I will do by the help of Budge, who at pp. 794—795 of his Handbook of Physiology, gives us the two following short histories which have come under his own observation. His words run thus in translation:—"After a long-continuing stagnation of blood at the end of the small intestine and the beginning of the large, in consequence of which exudations and adhesions of the peritoneum ensued, the entire right half of the body became weaker than the left, was tired sooner by exertion, the right foot became cold sooner under the same circumstances than the left, the right ear became much more easily the seat of vascular dilatation than the left, and other similar phenomena developed themselves. After a great abscess under the right gluteus maximus and an immense loss of pus, the right hand and the entire right arm became not only evidently thinner to the eye than the left, but also actually smaller." These cases are decisive as to the interference of the nerve system in the process of nutrition, and though organs and structures both physiological and morbid may and do exist and grow in animal bodies being as devoid of bloodvessels and nerves as though they were found in vegetables, still any argument based upon these undoubted facts can be met at once, if so we care to meet them, with the more or less accepted physiological axioms, "the interdependence of parts augments with their development; the solidarity of organs increases and is more intimate with each superaddition of a fresh factor to the entire economy." But these cases do not, of course, touch the question of the way in which this nerve influence comes to act on the tissues, whether mediately through the bloodvessels, or immediately on the tissues with which they are supposed, in the case of the salivary glands by Pflüger, though not, as I apprehend, by Dr. Beale (Phil. Trans. 1865, p. 447), to become continuous. Nor does such an experiment as that of Bidder, in which a salivary gland, under nerve stimulation, picked out two-thirds of the entire quantity of iodide of potassium in the circulation, to one-third picked out and secreted in the saliva of its fellow not so stimulated. For a more innervated gland is also a more vascular gland, and of the two antecedents, greater nerve-current and great blood-current, we have no right from this experiment to say that the one rather than the other is the cause of this particular consequence. And much probability will come to attach itself to Virchow's views, according to which innervation is not proven to increase nutrition directly, but works only mediately by its influence on the bloodvessels, in the minds of persons who may be averse to multiplying laws by cases such as these. We go to a case, as I suppose most of us may, like myself, have gone, and we find one side of the body frequently hot and the other cold; this latter, the friends will tell us, is the paralyzed side. We find it is not, and Bernard's experiments enable us to understand why it is so. An excellent case to the same effect, of showing how increase of vital properties may take place in the entire absence of any connexion with the upper part of the cord or brain, may be given from a paper of the late Sir B. C. Brodie's, from the twentieth volume, 1837, of the Medico-Chirugical Transactions:—"A man was admitted into St. George's Hospital, in whom there was a forcible separation of the fifth and sixth cervical vertebræ, attended with an effusion of blood within the *theca vertebralis*, and laceration of the lower part of the cervical portion of the spinal cord. Respiration was performed by the diaphragm only, and of course in a very imperfect manner. The patient died at the end of twenty-two hours, and for some time previously to his death he breathed at very long intervals, the pulse being weak, the countenance livid. At last there were not more than five or six inspirations in a minute; nevertheless, when the ball of a thermometer was placed between the scrotum and the thigh, the quicksilver rose to 111° of Fahrenheit's scale. Immediately after death, the temperature was examined in the same manner, and found to be still the same."

The larger size of a horse's hoof, the nerve of which had been divided, should probably be similarly explained by the greater afflux of blood which would set in thither temporarily until the continuity of the nerve was re-established (Ogle, *Med. Times and Gazette*, Nov. 3, 1866). And, finally, such an occurrence as the inflammation of the skin, cartilage or cornea, after its own sweet will, and not in the line of an irritated nerve passing through it (Virchow's Cell. Path.; Chance's Transl. p. 299), seems to speak plainly enough to the self-sufficiency of animal cells to respond to what Neimeyer calls "Insulte," without appealing to any higher powers for assistance; just, in fact, as though they were as little animal, as truly vegetable, and as independent of any cranio-spinal centre as the gall-producing oak or willow.

But in spite of all this I am inclined to think that the direct action of nerves on all is a *vera causa*; and even if our highest microscopic powers do succeed in proving that nerve tissues are never continuous with any other tissues in any part of this distribution, it must still be recollected that such intervals as may be demonstrated will be, if not insensible, at all events infinitesimal, and nerve force may well be sufficient to act across such gaps as these. I can appeal for any justification to Professor Lister's experiment recorded in his paper on the "Cutaneous Pigmentary System in the Frog," p. 636—9; Phil. Tran. 1858; in which certainly the nerve system is shown to have some control over the molecular movements of concentration and diffusion quite independently of the blood vascular system. The cessation of the circulation in a frog's web entails the concentration of the pigment, therefore Professor Lister took a pale frog—*i.e.*, one in which the pigment was already concentrated, and tying a ligature above the ankle so as to eliminate the condition of cessation of the blood's circulation, he then eliminates the condition of nerve influence from the cranio-spinal axis by amputation above the ligature; *cessante causa cessat et effectus;* the nerve force is removed, and the pigmentary diffusion which it held in check is set up; and continues till superseded by the *post-mortem* concentration which ordinarily takes place, and produces that lightening of the dark hue usually seen in the frog after death. This experiment, which I have not given in full, nor in Professor Lister's own words, is a very striking one, and I hope I may remark, without offence, to any representatives of the German Fatherland to which physiology owes so much, that much that has been recently written and worked at there might have been spared had Mr. Lister's papers been as well known to them as they will be to their successors. They seem to me to make an era in the literature and in our knowledge of the essence of inflammation.

Here, if I may be allowed to digress somewhat, I would remark that Professor Lister's suggestion made in 1858, l. c. pp. 619 and 640, as to the probability of the existence in the limbs of a ganglionic apparatus co-ordinating molecular and other movements at the periphery, sometimes independently, sometimes subordinately to the cranio-spinally-placed nerve centres, may seem to have found a justification in Professor Beale's demonstration in 1865, of the ending of the muscular nerves in nucleate reticular plexuses. Assuredly the discovery of these networks bearing nuclei does away with the necessity for any further carrying on of the apparently interminable discussions as to the existence of an "idio-muscular" as opposed to a "neuro-muscular" contractility. But I will take this opportunity of saying that there are not wanting purely physiological considerations which, though not by any means amounting to demonstration, do nevertheless lend some little probability to the "neuro-muscular" explanation of those movements which take place in muscles separated from all connection with central nerve organs. Firstly, these movements are within my experience more marked and frequent in the muscular tissues of young animals, and the history of the development of nerves would lead us to expect to find a greater degree of independence in the peripheral nerve system than we should look for in the adult organism. For nerves do not grow out from cells in the direction of what we know in the adult state, and under low powers of the microscope as their branches; but, as Von Hensca has shown (cit. Quain and Sharpey, ed. 7, p. clxiv.) two nerve cells are connected by a fibre, and it is by the withdrawal of the

* See Otto "Neue Seltene Beobachtungen Samml," p. 10; Elsaesser, "Ditt. Sex. Mann. præter partes Sexuales," p. 36. Since writing the above, I have seen a note to page 23 of Mr. Paget's "Surgical Pathology," by Professor Turner, in which the fact that no disturbance of nutrition is effected by mere transplantation of the testis *in cocks* is brought forward to show that no mere nervous disturbance can account for these alterations of nutrition. I do not think that these negative results, obtained from experiments on half-a-dozen *birds*, can outweigh the positive facts of unilateral correspondence in malnutrition which have been so frequently observed in mammals. Cf. Hunterian Osteological Catalogue, vol. ii. p. 591.

one cell from the other, and the elongation, so to say, of the inter-connecting fibre, that the peripheral and central ganglionic systems respectively assume their adult relations. And just so, I may add, in certain annelids and lamelli-branchiata. We have, as we not rarely do have in the lower animals, a stereotyped, though but partial, adumbration of what is but a single scene in the moving diorama of the development of the higher; and we find the peripheral nerve-system bestudded with eyes or other sensory organs, and possessed of a prominence and importance relatively to the central nerve ganglia, which is only temporarily seen in the development of more perfect creatures. Secondly, many of the cases of death in adults in which this irritability is found to exist most commonly and markedly are cases in which, from very various reasons, the functions of the intra-cranial nerve centres are put into abeyance at a very early stage in the process deathward. Such are (see Nysten, cit. Brown-Séquard, Proc. Royal Soc., 1862, p. 211) cases of decapitation, of asphyxia, of sudden hæmorrhage from a large artery. Now, we know that movements do continue in a portion of intestine which has been deprived of its mesentery, and we ascribe the production of these movements to the presence in the walls of the intestine of the plexuses demonstrated to us by Meissner and Auerbach; and if we may ascribe like effects to like causes, we may ascribe the post-mortem twitchings of muscles to Professor Beale's neuro-muscular apparatus. In like manner we should expect from similar reasons, and we do find, as a matter of fact, this same neuro-muscular irritability greatly prominent in the small-brained, cold-blooded vertebrata, and in hibernating mammals. In all of these animals alike the central nerve-system is small relatively to the entire mass of their bodies; whilst in birds, or at least in the more highly organised of the class (for birds, like other bipeds, differ as to the mass and use of the brain—see Parker, Zool. Trans. 1862, 207), the brain may hold a more favourable relation to the entire mass of their bodies than in any other class of animals; and in birds, as is well known, with some few reptile-like exceptions, such as the peewit, muscular irritability ceases almost with their last act of inspiration.

Whilst speaking of this condition occasionally found in the muscles after death, I am tempted to say a few words of the empty condition of the arteries which is almost constantly found after death. I observe that V. Bezold has explained this well-known phenomenon as being due to a last nervous impulse communicated to the small peripheral vessels *from the brain*.

His words are (Untersuchengen aus dem Physiologischen Laboratorien in Wurzburg, pp. 358, 359, 1867), "Sicher ist aber ein ungemein wichtiges moment hierbei die Innervation der Muskeln in den kleinen Gefässen des Körpers. Man stelle sich vor, dass in der Agonie, in Todes-Kampfe das Vasomotorische Central Organ im Gehirn noch in Krampf-zustande versetzt wird welche mit Pausen der Erschöpfung abwechseln . . . . Ausserdem ist gezeigüt worden dass jenes letzte Ueberpumpen des Bluten aus den Arterien in die Venen bei den Sangethieren wenigstens, unter dem Einfluss einer letzter Thätigkeit des Gehirns geschieht." Surely all these "Vorstellungen" would have been spared if Professor V. Bezold had been acquainted with Mr. Lister's papers, or even with those points in them to which I have referred. Indeed that his view is untenable is clear from a consideration of the fact that the circulation can be kept up, and will, like the muscular irritability, persist in a decapitated animal for a long while after death if artificial respiration be put in play. The empty state of the arteries, *post mortem*, is most probably to be explained by the action of the peripheral nerve system on arterioles, though Dr. Alison would have explained it by the attraction *a fronte* force of the tissues around the capillaries; but V. Bezold's view of the source of the nervo-muscular action of the peripheral vessels is, I apprehend, more untenable and less plausible than most theories which have had their day and ceased to be.

The following short history seems to me to be a good instance of the action, or rather of the want of action, of the peripheral nerve system upon the arterioles. A man, who came some years ago under my own care, had had a bullet pass through his arm just above the elbow, so as to sever the musculo-spiral nerve. The scars of exit and entrance were in the lower third of the arm. Under ordinary circumstances the soft parts of the lower arm maintained their normal consistence, but their power of resisting changes of temperature was greatly impaired, as well of course as the sensibility of the parts supplied by the injured nerve. I recollect seeing the swollen state of the inner side of the hand one cold raw morning when the man was on sentry duty, and had his hand chilled down by the musket he had to carry. Now, I apprehend that this turgescence is to be explained by saying that the local or peripheral nerve system of the affected parts was competent under ordinary circumstances to regulate the calibre of the arteries; but that its activity was liable to be depressed, as under the circumstances related, to actual abeyance in the absence of the possibility of any assistance being supplied to it from the cranio-spinal nerve axis. Thus, under the depressing effect of cold, which seems to work here much as it does in the checking the regeneration of artificially amputated parts in snails and in salamanders (Müller, Physiology, by Baly, i. p. 404), the peripherally-placed ganglionic system was put into abeyance, and turgescence of the vessels it ordinarily supplied with "tone" ensued. Just similarly in mammals the skin of which has been covered with an impermeable varnish, and in which death is as much due to the chilling down which the destruction of the non-conducting power of their hairy integument entails as to the penning in of its various acrid and volatile and other secretions, œdema and vascular congestion are to be observed in the skin as well as in other organs. (Ranke, Physiologie, p. 456). The flame of mammalian life, like the flame of inorganic combustion of C H, can only be sustained at a high temperature; a certain reduction is as fatal to the one as it is to the other in the Davy lamp, and the vitality of the more exposed peripheral is more easily depressed than that of the more protected central nerve system.

I should be paying but a poor compliment to the judgment which has provided a Microscopic Exhibition for the instruction and entertainment of this evening, if I was to dwell at any length upon the relations borne by histology to medicine and surgery. And, secondly, if I were to dwell in the least adequately upon the importance of a knowledge of microscopic zoology to the diagnosis, and what is better than the diagnosis, and even than the therapeutics, the prophylaxis of diseases of all kinds from those which are considered trifling or contemptible by most men, except those who suffer from them, up to those which excite world-wide anxieties, such as trichiniasis or cholera, I should have to extend my address to a length you would shudder to think of. Upon one single point I will make a few remarks, and the purport of these will be to show how the manipulation of such an instrument as a catheter may find, if we are to do justice to our patients, its regulative condition in the manipulation and revelations of the microscope. I had myself recently cause to suspect that the determining condition of the triple phosphatic opalescence of the urine was to be looked for and found in the presence of some of those organisms which Pasteur has proved and hygienists have believed to be the real causative agents of fermentations and putrefactions. One accepted view of the causation of this most mischievous metamorphosis, is that the coats of the bladder, in consequence of altered innervation, as after spinal injuries, act upon the urine as so much dead matter acts on blood in causing its coagulation, or as the tissues round about the capillaries act when they are in an abnormal condition upon the rows of blood corpuscles within those canals; and by this "catalytic" agency break up the urea and throw down the ammoniaco-magnesia phosphates. Another view ascribes the like effect to the "fermentation" working of the abundant catarrhal mucus, which is in such cases flaked off from the inner walls of the bladder. Now, neither of these views suggest a *vera causa* for the effect they profess to account for. Blood coagulates when in contact with non-vitalized matter, and blood corpuscles arrange themselves in *rouleaux* under similar circumstances. But Mr. Lister, who has shown us so much which bears on this matter, has shown us also, and that in the last number but two (July 18, 1868), of our Journal, that urine will remain for an indefinite period undecomposed in a properly-constructed, which happens to mean a properly-contorted, receptacle, even though that receptacle be as little vitalized as glass. And Niemeyer has shown, what I daresay many who are now honouring me with their presence have observed, but, I think, not recorded, that urine often retains its acidity through protracted cases of vesical catarrh, and in spite of cumuli of clouds of "fermentative" mucus; which are, therefore, as little of *vera causa* as is "catalysis" itself. But the presence of vibrios in the urine, and that before it leaves the bladder, is a *vera causa*, *i.e.*, a present condition, and therefore possibly a cause, or connected with the cause, of the phenomena to be investigated (see Beale "On the Urine," p. 196), and the idea that the alkalescence in question depended upon them, an idea which I had not the time to find an opportunity for verifying for myself, I find has been verified for the benefit of others by Niemeyer, with the assistance of Traube and Teuffel. "In the course of last year," says Niemeyer (l. c. ii. 66, 1868), "I arrived, partly by means of an observation of Traube's, partly by means of experiments and observations of my own, which have been published by Teuffel, in the Berlin 'Klinische Wochenschrift,' at the conviction that it was not the vesical mucus, but lower organisms, which probably get into the bladder by means of the introduction

of badly-cleaned catheters, and excite there the alkaline fermentation of the urine." Now whether the vibrios find their way into the bladder exclusively on dirty catheters or not, I apprehend that the addition of some carbolic acid to the oil used for lubricating these instruments, whether they be guilty or not of what is here laid to their charge, will be a piece of practice calculated to prevent the alkalescence which the vibrios cause by preventing these vibrios themselves from entering on their evil activity. Mr. Lister's paper just alluded to will show that this is an experiment which may very safely be tried; if carbolic acid can be safely introduced into a wounded pleural cavity, assuredly we need not hesitate about passing it into a bladder. Thus many scientific researches, undertaken in the first instance for the elucidation of speculative truth, and for the rectification not of unsound organs and functions but of unsound theories and explanations, and prosecuted throughout by the aid of the most refined methods and instruments, come ultimately to bear upon such matters as catheterization and alkalescent urine. I would not, however, be thought to undervalue the worth of researches carried on at whatever cost with the sole object of procuring those correct notions as to the way in which processes, even wholly beyond our power of modification, have been and are being carried on. It is a great and positive gain when we get rid of one false hypothesis, one single false formula which by frequent repetition has attained to the dignity of a philosophic axiom, and acquired a sort of prescriptive right to "warp us from the living truth." The Chemists, as I am informed, are conspiring to effect what the old Greeks would have called a "Catalysis" of the kingdom of "Catalysis" itself, and its banishment to the Limbo of Vanity, there to herd with Phlogiston and many other and younger as well as older unsubstantial Idola Theatri; and though these alterations of theory may not as yet have affected the oxygen we breathe, nor even have enabled us as yet to regulate with any greater precision the processes of fermentation with which we have for so many ages had an empirical familiarity, they have given us at least a warning as to maintaining always that proper diffidence as to the all-sufficient validity of our theories, by whomsoever promulgated or endorsed, which is so constantly of avail in actual practical work. The phenomena, let me add, to account for which the hypothesis of Pangenesis has been recently (Darwin, "Animals and Plants under Domestication"; 1868, ii. p. 403) put forward provisionally are and will, we may believe, always remain beyond our control, but there will be no one, I suppose, who will not feel an interest in observing how the revelations into the all but infinite divisibility of "germinal matter," which we owe to Professor Beale, may come to bear upon the explanation of the marvellous phenomena of reproduction and hereditary transmission; nor can I leave this subject without remarking that it is in great probability upon the self-multiplication of such infinitesimal particles as this hypothesis of Pangenesis postulates that processes to the naked eye, the very reverse of Genesis, have been found to depend; and the Blue Book on the Cattle Plague (3rd Report of the Commissioners, &c., p. 151,) will show you that here, too, we are dependent on the employment of the very highest powers of the microscope; and it is scarcely necessary to add that its employer was in this case Professor Beale.

If I have been short in speaking of the advantages which the histology of modern days has conferred upon its therapeutics, I might be shorter still in dealing with my third head—the dependence, namely, of the healing art upon the facts of Anthropotomy—that is to say, upon the naked-eye knowledge of the structure with which it has to concern itself. Some little, however, I must say with your permission. Some persons are inclined to think that there is some sort of antagonism between the interests of microscopic and those of naked-eye anatomy; and hints more or less obscurely expressed may be found to this effect here and there in writings even of the present day. It is in much the same spirit that persons are found to say that the sending of missionaries to the heathen abroad entails so much curtailment of similar work at home, and that others will say that the starting of any fresh charitable institution necessitates the subduction of so much from the funds available for those already on foot; and that others again will say that the encouragement of natural science is "inimical"—that is the word they employ—to the progress and cultivation of literary and classical studies. Now, all these views depend upon the radically false assumption that intellectual and moral activities are limitable and measurable by certain quantitative conditions, just as a man's expenditure is or ought to be limited and measurable by his balance in the bank. This analogy is a wholly fallacious one, but it has nipped many an excellent project in the bud. A truer analogy is furnished us by the history of those infinitesimal scraps of germinal matter of which I was just now speaking, which are hard to destroy even with floods of carbolic acid and copperas, and which possess a faculty of self-multiplication wholly unparalleled within my experience in the history of the metallic objects of which we were just now speaking. Activity and earnestness, in fact, which are some of the best things, resemble some of the worst in being eminently contagious. The example of a strenuous labourer in one field, spreads into the weedy acres of his slothful brethren on the right and left; and the improvement of the microscope has but been accompanied by a more thorough and accurate working out of human dissection. Let us leave metaphor and general statements, and come to facts. I have in my possession a work written for the use of anatomical students in the University of Edinburgh—a place then as now at least on a level with the most advanced centres of such education elsewhere in Great Britain. Its title is, "The Anatomy of the Human Bones and Nerves, with a Description of the Human Lacteal Sac and Duct, by Alexander Monro, M.D., late Professor of Anatomy in the University of Edinburgh. 1810." The date of its appearance takes precedence, therefore, by some dozen years at least, of the first appearance of an achromatic combination, and if the development of microscopic zeal had really been injurious to the diffusion of thorough anthropotomical knowledge, we should find here in perfection that precision and fulness which *ex hypothesi* are the exclusive fruits of individual attention and undistracted concentration. Now, a few weeks ago I was pursuing some anatomical researches into the homologies of the shoulder-joint muscles, and by the suggestion of one or two of my friends, amongst whom I may mention Dr. Boycott, I took up the line of argument for homological identity which innovation furnishes. Being deep in the country, I was reduced to consult, in the absence for the moment of other books, the work I have just mentioned, for a small matter in the composition and decomposition of the brachial plexus. This is what I found to satisfy my inquiry in a book expressly treating, you will please to recollect, of the nerves, and written by one of those "famous old anthropotomists" who were not distracted by "microscopische spielereien." P. 291.—"The fourth cervical nerve, after sending off that branch which joins with the third to form the phrenic, and bestowing twigs on the muscles and glands of the neck, runs to the armpit, where it meets with the fifth, sixth, and seventh cervicals, and first dorsal, that escape in the interstices of the *musculi scaleni*, to come at the armpit, where they join, separate, and rejoin, in a way scarcely to be rightly expressed in words; and, after giving several considerable nerves to the muscles and teguments which cover the *thorax*, they divide into several branches, to be distributed to all the parts of the superior extremity. Seven of these branches I shall describe under particular names." These seven branches have the particular names of scapularis, articularis, cutaneus, musculo-cutaneus, muscularis, ulnaris, and radialis; of such little trifles as the connexion of the second and third cervical sympathetic ganglia which give off heart nerves, with the arm nerves upon which connexion the pain down the inside of the arm in heart disease, Niemeyer (ii. 338) supposes may, and the older anatomists would have said *must* depend; as the subclavius nerve and its connexion with the phrenic, and so with the shoulder-tip pain in liver disease, we have just as little mention made as we have of the nerves supplying those small muscles, the pectorales. Surely knowledge is not like a volcanic archipelago, where the upheaval of one mass of solid ground entails the submergence of another; rather it resembles some vast tableland which is rising, and now and then at accelerated rates of progress out of the waters, and has, in these days of the subdivision of property and of labour, its broad and continuous surface seized upon, partitioned out by enclosures, and put under cultivation by various occupants so soon as ever its outlines are recognisable.

My last topic in this division of my address is the connexion which comparative anatomy has with medicine and surgery, and the bearing which a cultivation of this department of biology has, or is likely to have, upon the interests of the profession. Of the benefits which comparative anatomy receives at the hands of medical practitioners there is little occasion to speak; or rather Mr. Parker's volume on "The Shoulder Girdle," just published by the Ray Society, may speak for me; it is only less vast than valuable, and will constitute the commencement of a new epoch in the science. But what I have to speak to is not the benefits which comparative anatomy receives, but those which it can confer. And I believe that the educational working of this study is perhaps the particular line along which the best fruits for the profession, and for the public, may reasonably be looked for. Any study which forces its students into that most valuable knowledge—the knowledge of when a thing is proved, and when it is not—is just

facto an ally of real medicine, and a deadly enemy of quackery. A person who has in any way become acquainted with what reasoning and reasons are in one subject, will be apt to look for similar reasons and similar reasoning when he has to deal with another, and especially if that other be a closely allied subject. And when natural knowledge shall have become more widely diffused through the general public, an end which we may hope to help towards accomplishing by means of our School of Physical Science, quackery, with its painful spectacles of reputation and confidence unfairly withheld and more unfairly bestowed, will cease to flourish in all its present exuberance. A worker in Biology gains reputation accordingly as he is acute enough to observe and generalize for himself, and accordingly as he is conscientious enough to make himself master of and duly acknowledge the labours of others. It cannot be said that learning, talent, and labour are equally certain to secure prominence either for a medical doctrine or a medical practitioner. The medical doctrine obtains currency, acceptance, and popularity and the confidence of an ill-educated public by virtue ordinarily either of the effect on the imagination, which its parodoxical character secures for it, or of the effect on the ear of the alliterative ring of the phraseology in which it is embodied. The success of persons, again, in the medical profession and in some other walks of life too, may depend upon personal qualities quite other than any connected with diligence, attainment, or ability—upon, say, certain peculiarities of manner, either in the way of polish or of that of roughness. The greatness of the stake, his own health, for which a man is playing when he adopts a particular doctrine or doctor of medicine, no doubt disturbs the balance of such powers of judgment as he may have, much as in Gessler's hopes the placing of an apple on the head of Tell's son disturbed the steadiness of the father's hand and eye. But habits of thought as of other things may be acquired by a proper course of education, and habits, like drill, steady a man under emergencies; and a scientific training enables a man to set about forming a right judgment in a right way and upon proper and legitimate grounds, even when nothing less than life itself is at stake. If a knowledge of such a subject as comparative anatomy, and of its external aspect, scientific zoology, is a knowledge which will give the layman more power of forming right decisions, it is perhaps needless to labour long at showing that this self-same knowledge may be of the like service to the professional man. A sort of practical proof of its value is furnished us by [the fact, that in Germany a dissertation on some subject of comparative anatomy is often accepted as the thesis of a candidate for the degree of doctor in medicine. By such a regulation we have the obvious fact recognised, that the same sort of skill in the employment of methods, the same familiarity with organs, tissues, and functions, the same reasoning powers, are employed in investigating the problems of life wheresoever existing. The second aphorism of the "Novum Organon" applies to the one as to the other line of investigation, that of Human, and that of Brute Biology—*instrumentis et auxiliis res perficitur*; and alike in both, *nec manus nuda nec intellectus sibi permissus multum valet*. Comparative anatomy finally, besides thus benefiting the public firstly, and the profession secondly, is of use to human biology and medicine, as such, inasmuch as it casts so much light upon the problems which the more highly evolved organs, functions, and other relations of our own species, render in a much higher, and, indeed, sometimes in the highest degree difficult or impossible to investigate. Answers to what are riddles in human anatomy and physiology are often to be found given in very simple language in the structures and functions of the lower and lowest animals. Of such hints furnished by the brute creation towards the proper solution of certain problems which concern each and all of us in dealing with our own species, I will herewith, by your permission, give a few. Of the use of rest towards the repair of injuries I presume there is little doubt, but the best established teaching is all the better for the support of a few concrete examples. Now, in what animals do we find the greatest capacity for repair of injuries, and for the reproduction of lost parts and limbs? Precisely in those in which the whole of life is carried on at the slowest rate, and in the nearest approximation to rest which is compatible with animality,—in those animals, to wit, which breathe water, and have but its scanty percentage of dissolved oxygen to sustain their animal functions. The metamorphoses which an animal may have undergone, or may have to undergo, have very little directly to do with its power of recovery from injury, or of regenerating a lost limb. No animals go through more complex metamorphoses than do many of the crustacea, and nearly all the echinodermata, yet assuredly no other class has a larger capacity for the reproduction of lost fragments of their bodies. Now the latter of these classes is exclusively, and the former all but exclusively, aquatic. The more perfect, again, an insect's metamorphosis, *i.e.*, its power of building up tissues and organs, the more perfect ordinarily, or rather the more profound, has been its quiescence as a pupa. Indeed, the very exception here proves the rule, and proves it to be a good one, for such hemimetabolous insects as, like May and dragon flies, come, in their imago state, to differ almost as much from their larval forms, as the imagos of many holometabolous insects do from their larvæ, are during those preparatory stages as completely aquatic as any crustacean (Westwood, "Introduction to Entomology," ii. 29, 38; Carus and Gerstaecker, "Handbuch der Zoologie," p. 29). I am aware that there is such authority as Mr. Paget's ("Surgical Pathology," p. 123, ed. Turner), and Mr. Darwin's ("Animals and Plants under Domestication," vol. ii. p. 15), in favour of regarding the power of repairing injuries as standing in an inverse ratio to the amount of metamorphotic change an animal has gone through; and I must therefore take the more pains to show that my explanation, to the effect that this happy power depends mainly upon the peacefulness and quiet with which the various processes of life are carried on ordinarily, and after the mutilation, is the truer one. My opponents' case would rest on such facts as these which follow. I will give them first, and then show how they really support my views. The larvæ or tadpoles of the tailless batrachia, but not the adults, says Dr. Gunther (Darwin, l. c., and Owen, Comp. Anat., Vertbr. i. p. 567), are capable of reproducing lost limbs. So with insects, says Mr. Darwin, *in loco*, "the larvæ reproduce lost limbs, but except in one order" (the Orthoptera, and amongst them the Phasmidæ bat?*) "the mature insect has no such power." There is, however, one common property which lies at the bottom of the power of repair both in the larval forms and in the perfect adult animal, both in the invertebrata and in the vertebrata specified. This common property is the comparative insignificance of the apparatus for aërial respiration in all alike, in the larva of the anurous amphibia, in the larva of the butterfly, and in the orthopterous insect, the lungs or the tracheæ, as the case may be, contrast to disadvantage with those of their congeners, or adult representatives, which have come to differ from them in having lost the power of reproducing lost parts. But active respiration is a pre-requisite for activity of function and rapidity of rate of vital processes; and the absence of this is, according to my argument, the cause of the presence of the reparative power. The lungs are of course all but wholly in abeyance in the tadpole, and the tracheæ have no vesicular dilatations developed upon them in the caterpillar forms of any insect, nor in the adults of the non-volant Orthoptera. In the Phasmidæ, the curious "walking stick" insects, we observe just the same sluggishness, combined with great tenacity of life, which we observe among mammals in the Bruta. Let me add some more facts in further illustration of my position. The Myriopoda, which Mr. Newport has shown to possess this power of repair up to the time of their final moult, are so little like the more typical insects, as to have been classed with the Crustacea, by no less an authority than Von Siebold. Any one, again, who will compare the simple non-cellular lung of the adult batrachian newt *salamandra aquatica*, which possesses an unlimited power of repair *as an adult*, but *not in its young stages* (Bonnet, Œuvres, Hist. Nat. v. Pt. i. p. 294,) with the lung of the adult frog, will have little difficulty in understanding how their power of repair differs out of all proportion more than the amount of the metamorphotic changes they severally go through. The land salamander, *salamandra terristres*, has so far as I know escaped the hands of Spallanzani and Bonnet: its adult lung being little inferior in extent and development of spongy matter to that of the adult anura. I should expect the power of regeneration to be reduced to zero as in them. If the teaching of Comparative Anatomy has forced me to differ from the teaching of Mr. Paget, there are other facts in the same region of research which, as it seems to me, put one of his other many valuable doctrines in a clearer light than even his own clear enunciation of it. "Each man's capacity," says Mr. Paget (*Lancet*, Aug. 24, 1867), "for bearing a surgical operation may be best measured by the power of his excretory organs in the circumstances in which the operation will place him. Now, I am inclined to ascribe the very considerable, and, indeed, on my views, somewhat exceptional powers of reproduction which two sets of air-breathing terrestrial animals, the pulmonate snails and the earth-worms, possess, to the great development of their excre-

* There seems to be some little doubt whether even a Phasma can regenerate lost parts after its last moult, and some authorities would not consider it adult till after such ecdysis. The crustacea, however, moult many times after attaining the adult state, *i.e.*, a state in which they can reproduce the species.

tory apparatus. Living as they do very ordinarily in atmospheres laden with carbonic acid from decaying vegetable matters, they must get rid of the products of their waste and wear in the shape of solution in fluid; and the alkaline secretion with which the bodies of both are so abundantly slimy, furnishes just the required medium. When injured or mutilated, these animals can withdraw themselves pretty completely from the atmospheric oxygen by shedding out this secretion, and it at the same time disembarrasses their system from any excess of carbonic acid which may be generated within it. Thus they can attain the most perfect possible condition for repair and regeneration, the minimum of activity of all save the excretory organs; and I submit that it is possible that these two conditions may be connected as cause and effect, just as in the reverse direction a defeat of surgical skill may be connected with the presence of a fatty kidney or liver, or the excitability of a nervous system. It is going perhaps too far to attempt to explain the much greater power of repair which Amphibia possess as compared with either Pisces below or Reptilia above them to the larger size, and consequent smaller aggregate surface and less perfect aërating power of their blood-cells, and to the transpirability of their naked skins, which execute such important depuratory work for them, and are so closely connected and correlated with their lungs, livers, and kidneys. It is curious, however, and interesting to remark that the older anatomists in commenting on the very obvious solidarity of these latter organs, went on, in their ignorance, I imagine, to a great extent, of the nature of amyloid and other degenerative changes in such cases, to observe that it was illustrated by the "fact" that, as the lungs grew smaller so the kidneys grew larger in phthisis.* (See Funke, "De Salamandræ Terrestris vitæ," 1827, and Michel, "Path. Anat.," i. 613, 646.)

Verloren, as quoted by Donders ("On the Constituents of Food," translated by Daniel Moore, M.D., p. 24), has shown how the history of insects bears on the question which we are this afternoon to have expounded to us of the "Relation of Food to Force," and the very title of Bischoff's and Voit's work, "The Laws of the Nutrition of the Carnivora," show how this subject, to which I shall no further allude, but leave it to the able handling to which it has been entrusted, is dependent on the life, and the modes of life, of the lower creation. But I would say that it was from a study of the structures of the class of animals last mentioned—viz., the carnivora—that I first came myself to be convinced that the uterine mucous membrane would, if properly looked for, be found in all animals alike to stretch after delivery over the area previously occupied by the placenta; and assuredly there is no one of the many complex and hard to be investigated problems of human physiology to which we are more bound to be thankful for light whencesoever obtained; and this, though the light come, as in justice to Dr. Matthews Duncan and Dr. Priestley, I must say it did, in the way of illustration and confirmation rather than in that of discovery. (See Zoological Society's Transactions, 1863, p. 289. Dr. Duncan's "Researches in Obstetrics," p. 206.)

These facts of the structural and functional arrangements of the lower animals have been used recently to illustrate some other points of uterine pathology and therapeutics in our own species. In a work by Dr. F. A. Kehrer, of Giessen, in two parts, the former of which was published in 1864, and treats of "Die Zusammenzieh ungen des Weiblichen Genital canals," and the second of which was published in the present year, 1868, and treats of "Die Verglechende Physiologie der Geburt des Menschen und der Saugethiere;" I find no little light thrown upon the question of relative position, whether as cause or effect, in which early and late abortions respectively stand to imperfect involution of the uterus. And I find also *in loco* a very distinct admonition as to the inexpediency of allowing fear of decomposition to terrify us into what is called, "meddlesome midwifery." These extracts I think you may be interested to hear; I will simply quote them, and leave you, who are so well able to do it, to make the application of them for yourselves. Heft i. p. 52. "Finally let it be remarked that in rabbits in the earlier stages of gestation I saw the fœtus with its fœtal envelopes protrude entirely out of the os uteri, whilst the placenta still remained firmly attached in the uterus; a phenomenon which indicates either that in the earlier stages of pregnancy the placenta materna is less lacerable, or that the motor power of the uterus is a relatively smaller one, and one which finds its analogy in the occurrences which take place in abortions and premature deliveries in the human subject." In his second Heft., p. 166, Dr. Kehrer, in speaking of the retention of the placenta being sometimes followed by symptoms like septic poisoning and sometimes not, has words to the following wise effect:—"What chemical changes may be set up in the retained placenta is clearly dependent hereon, whether the after-birth is shut off from contact with the air by the genitalia or not; for if air finds access to it the membranes of the ova putrefy; if air is excluded, a process of decomposition, probably identical with one of maceration of the fœtus but wanting further chemical investigation, is set up. The occurrence of the one or the other eventually is so far of importance, as thereupon hangs the after-effect of a retention of the placenta upon the general health. In fact, one observes in women, just as in the animals mentioned, sometimes only insignificant symptoms, sometimes emaciation and withering up; sometimes, as after the absorption of putrilage from the decomposing membranes, a violent, even a fatal pyæmic fever. In the face of these facts, it seems to me to be rational in ruminants, in which the cotyledon can only be detached from the uterus by considerable violence, and scarcely even then, completely *to avoid all introduction of the hand into the cavity of the uterus after delivery*, just with the object of keeping it free from the ingress of air, and to leave the separation of the placenta rather to the natural forces. One will thus best avoid putrefaction being set up in the cavity of the uterus, and so expose the animal the less to the risk of a pyæmia." I have not quoted from the recently published works of Dr. Matthews Duncan and of Dr. Grally Hewitt, though I have specified in my notes the pages of those works which bear upon what I have just quoted from a foreign source. I have forborne to do this, not because I think those works less, but because I think them more valuable, and I presume they will be in your hands as they have passed through mine.*

The human anatomist who has once seen in the lower animals the structures which represent, as it were, in exaggeration or caricature, the human costo-coracoid membrane; the tuberculum pubis with the homologue of the clavicle which is attached to it as Poupart's ligament, or the supra-condyloid process of the humerus, is not likely to forget their existence when, with either scalpel or bistoury in hand, either for the ligature of artery or the setting free of a hernia, he has to deal with their representatives in the human frame. But if I am right in thinking that the ciliary muscle in the eye would not have secured for itself the notice which it has done of late years, had it not been for the much more obvious manifestation of a similar, if not homologous, muscular apparatus in the eye of the bird, I apprehend that I am justified in saying that every surgeon who performs Mr. Hancock's operation of cyclicotomy for glaucoma, is under obligations whilst so doing to comparative anatomy and Sir Philip Crampton. I need not speak of the bearing of the discovery of this muscle in the human eye by Mr. Bowman upon the physiology of its adjustment to clear vision at varying distances. Pure physiology, again unassisted by comparative anatomy, has made much of pure function; but much as has been attempted in the way of experiment with infusions of pancreatic substance, and with the introduction of canulæ into the duct of the gland, I am inclined to think that a comparison of the relative size of the gland in the carnivora and the herbivora respectively, in a dog, say, and in a rabbit, points as unmistakably as any of the lines of experiment just referred to—which, by the very nature of the case, are greatly beset with several sources of fallacy—to the fact that this salivary gland is concerned as much with the digestion of albumen and fat, as with that of starchy substances. With the remark that Hyrtl's discovery (Wien. Zool.-Bot. Ges., 1861, cit. Henle) of the diverticular character of the glomeruli in the kidney of the cetaceans and amphibia, bears not a little upon the existence of a similar arrangement between the vasa recta and the renal arterioles in the human kidney, whereby, as by the direct communication shown by Van der Kolk to exist between the arteries and veins of the *pia mater*, the capillary circulation may be skipped and the tissues in relation with it left at rest, I leave this part of my subject and begin the concluding portion of my address.

In this part of my address I propose to consider, and that mainly by the light of recently-attained biological results, the value of two great rules for the conduct of the understanding, each of which has a legitimate sphere of application, but the former of which enjoys more and the latter less than its deserved prominence. The first of these two regulative principles has received the endorsement of Newton, and it stands as his

* For accounts of experiments as to regeneration of lost or destroyed parts, see Darwin, "Animals and Plants under Domestication," ii. 15, *ubique citata*. Owen, "Comp. Anat. Vertebr.," i. p. 667. Newport, "Phil. Trans.," vol. 134, 1844, *ubique citata*. Paget, "Surg. Path," ed. Turner, p. 123. Spence, "Batr. Ana. and Mag. Nat. Hist." for the current month, August, 1868, citing the "Lloyd" of Hamburg, p. 118. McIntosh, "Experiments on Carcinus Mœnas," p. 28.

* Dr. Grally Hewitt, pp. 39, 342, 343. Dr. Matthews Duncan, "Researches in Obstetrics," pp. 276, 284, 285. Cazeax, "Traité des Accouchemens," 334, 349.

first "Regula Philosophandi," at the commencement of the Third Book of the *Principia*. It was known in the days of the schoolmen as the "Razor of Occam," and in later days it has been styled the "Law of Parsimony" or "Economy." Newton enunciates it as follows :—"Causas rerum naturalium non plures admitti debere quam quæ et veræ sint et earum phænomenis explicandis sufficiunt. Dicunt utique philosophi. 'Natura nihil agit frustra ;' et 'Frustra fit per plura quod fieri potest per pauciora.' Natura enim simplex est et rerum causas superfluis non luxuriat." I know that this Regula has great influence on the minds of many biologists, and I believe that this its influence is by no means always for good. This is not a subject in which authorities ought to count for much ; but I may say that while the names of Aristotle, Malebranche, Maupertius, St. Hilaire, Goethe, Bichat, and Dugald Stewart may be quoted in approval of this rule ; the names of Bacon, Mill, and De Candolle may be brought forward by those who repudiate it or curtail its application. Our motto, however, is "Nullius addictum jurare in verba magistri ;" and our business is to ask, not what men have laid down, but how nature operates. Can a phenomenon have more than one cause, or can it not? Is it possible, for example, and to put the question in a concrete and most practically interesting point of view at once, that a fever which we know can spread by infection or contagion, can also originate spontaneously? I rather incline, though but doubtfully, and after an imperfect examination of imperfect data, to anticipate that a negative answer to this latter question will turn out some day to be the true one ; but I do not know that there is anything in the analogy of nature to compel us to incline towards this negative conclusion *a priori*. Such a phenomenon, at all events, as a living animal is often enough produced by two or more distinct processes, within the limits of the same species ; as, for example, from ova of different character, summer ova or winter ova, impregnated or unimpregnated ova ; by fission or gemmation ; through two different series of metamorphotic changes. And such a phenomenon as the production of a particular tissue may depend—in the case of adipose tissue, for example—upon the employment in Nature's laboratory of one or the other of two different chemical compounds. In each and all of these cases, the maxim which has many a time been sonorously enunciated in these Schools, "Entia non sunt multiplicanda præter necessitatem," would, if listened to, have closed our ears and eyes to at least one-half of the truth. That Bacon would have classed this maxim with his Idola Theatri, I think I am justified in saying, for that in the very next section (Section xlv.) of the "Novum Organon" to that in which he treats of these delusive notions, I find these words : "Intellectus humanus ex proprietate sua facile supponit majorem ordinem et equalitatem in rebus quam incurrit ;" and if I am told, as by Mr. Mill (*see* "Logic," vol. ii., p. 379, ed. 1846), that Bacon, in the actual practice of investigation, acted as though there were no such thing as Plurality of Causes, I need only answer that herein his practice did not differ from his precepts at all more widely than does the practice of many other writers, of many practising, of many teaching doctors, differ from theirs. I have a satisfaction in quoting the living De Candolle, who enjoys one of the first and best deserved scientific reputations of the day, in repudiation, of Maupertius' famous principle of "least action." De Candolle writes thus in his "Geographie Botanique," vol. ii. p. 1115—"Nous aimons à croire aux moyens simples peut-être uniquement à cause du peu de portée de notre esprit."

What, then, is the legitimate application, where does Nature really bind herself to the observance of a "Law of Parsimony?" In, as I think, three distinct lines of her operations. Where an organ can be divested from one and set to discharge another function, there Nature will spare herself the expense of forming a new organ, and will adopt the old one to a new use. She is prodigal in the variety of her adaptations, she is niggard in the invention of new structures (Milne-Edwards, cit. Darwin's "Origin of Species," p. 232). The complicated arrangement of co-operating muscles whereby the bird's third eyelid is drawn across to moisten and wipe its eyeball without undue pressure on the optic nerve, is manufactured, if so we may express ourselves, out of the *suspensorius* muscle, which in other animals has but the simple function of slinging up the eye. The scarcely less complex and beautiful arrangement of the bird's *levator humeri* is the result of a modification of a subclavius muscle.

Secondly, where, by availing herself of the inorganic forces always at work and available in the circumambient medium, whatever that medium may be, or where, by the employment as in what is called "Histological Substitution," a lowly organized or vitalized tissue, such as elastic tissue, she can spare herself the manufacture of such expensive structures as muscle, there Nature adopts a line of practice which we call a Law of Parsimony. Where a suspensory muscle for the eye can be dispensed with altogether, as where there is a more or less closed bony orbit, as in ourselves, and an airtight cavity formed by it, together with the soft tissues lining it, there atmospheric pressure is trusted to to steady the eye in its socket, as it refixes the tooth loosened by inflammation, and holds the head of the femur in theirs. The eye of the burrowing mole, on the other hand, loses its *recti* and *oblique* before it verges itself into total extinction ; but this very *suspensorius* it retains after the wreck of its other property as its guardian in the undivided undifferentiated temporo-orbital fossa.

Thirdly, where matter that would otherwise be wholly refuse, and to be rejected, can be utilized, there Nature exemplifies this law by her "utilization of waste substances." The transverse colon, with its various contents, aids and eks out the elastic recoil of the lungs in expiration ; and by its near approximation to the stomach, has, as Duverney long ago pointed out, the shock of the ingestion of fresh food, propagated directly to it as a warning against sluggishness in the discharge of its own function. The air we use in speech, as Mr. Paget used to point out, we could not use for breathing.

Many other instances of the "Law of Parsimony" might be given ; but I know not of any which cannot be reduced under one or other of these three heads ; I know of none, that is, which can be in any way held to negative the tenability of a law of "Plurality of Causes." The second great principle for the regulation of the understanding of which I wish to speak, is one which I believe possesses less currency and notoriety, and is less observed than it deserves. This canon bids us, in considering a complex phenomenon, to be most careful that we omit none of the circumstances which can by any possibility be of the essence of the case. And as the possibilities of nature are all but infinite—as, for example, the investigator of problems of geographical distribution knows well that a "secret bond" may bind up together, and that inextricably, the interests of organisms removed as far as possible to all appearance from each other in the scale of life, as a fly or a plant may, by its increasing and multiplying, make half a continent uninhabitable or inhabitable by the highest mammals ; I apprehend that in biological and medical problems, by the phrase "all the circumstances which can by any possibility be of the essence of the case," we mean practically, "*all* the circumstances of the case," without any qualifying limitation. But we will let Descartes, to whom the enunciation of this rule is usually and, so far as I know, rightly assigned, enunciate it for us in his own words. These run thus ("Œuvres," tom. xi. 1826 ed. V. Cousin, p. 23) :—"Règle Septième pour la Direction de l'Esprit. Pour compléter la science il faut que la pensée parcoure d'un mouvement non interrompue et suivre tous les objets qui appartiennent au but qu'elle veut atteindre et qu' ensuite elle les resume dans une énumération methodique et suffisante." Some of the very greatest advances which have been made of late in practical diagnosis have been made in the spirit of this recommendation. The application of a chemical test to the urine for information as to the expediency of giving or withholding wine in the case of a sinking life, would have seemed to Swift, could he have had any idea either of such a procedure or of the employment of a sphygmograph for the same object, more absurd than any of the follies he ascribed to the philosophers of Laputa. But as Archbishop Whately, a name to be greatly honoured here, and, indeed, wherever else liberality, and fearlessness, and ability are held in respect, has well pointed out, the absurdities of Laputan aspirations are less wonderful than the actual attainments of modern science. And to these results science has attained, for that her votaries have known that what may seem to Swift, and such as Swift, to be but curious and dilettante, otiose, or even disgusting, may turn out ultimately to be essential elements in problems the solution of which promote directly and greatly the interests of man, and the glory of Him to whom nothing is common nor unclean. Could anything have seemed at first sight to be more impertinent, more strongly curious and trifling, than to inquire during an epidemic of cholera what was the nature of the subsoil in the area it was ravaging, to what depth it was porous, and at what level the water was, and had been previously standing in it? Yet, as I think, V. Pettenkofer has at last fought out and won his battle on these points (see "Zeitschrift fur Biologie, Bd. I. Heft iii. und iv., 1865 ; Bd. II. Heft i., 1866 ; Supplemental Heft, 1868, p. 54) ; and the distinguished President of our "Public Medicine" section, Mr. Simon, who is as little prone as most men of science to take up over readily with any new wind of doctrine, has told us (Report Privy Council for 1866, p. 366 and 457) that certain of his carefully observed cases of the distribution of this disease seem to illustrate and find their explanation in V. Petten-

kofer's theory. I have pleasure in adding that I see by papers published by the illustrious Professor of Munich in the "Allgemeine Zeitung" for June last, that he has been able to show that amongst all the other circumstances of the case at Gibraltar and at Malta, there were still to be found, all guessing and objections notwithstanding, the porous subsoil and the retreating ground water, as factors in the complex constituting an area or arena for cholera. Let us atttend to and note always all the circumstances in every complex phenomenon which we have to investigate, but let us not betake ourselves over-hastily to the process of eliminating antecedents, until we be quite sure that they do not enter as factors into its causation.

I may say, in conclusion, that attention to this seventh rule of Descartes might have saved such students of natural science as have fallen into materialism from falling into it. The physiologist, as such, has nothing to do with the data of psychology which do not admit of being weighed or measured, nor of having their force expressed in inches or ounces. This language, which I long ago employed myself (*Nat. Hist. Rev.*, April, 1861; *Med. Times and Gazette*, March 15, 1862), coincides with an utterance which I am glad to see in Mr. Herbert Spencer's recently issued first number of his new edition of "Principles of Psychology." There (part i. chap. i. p. 48), Mr. Spencer says, "It may safely be affirmed that physiology, which is an interpretation of the physical processes which go on in organisms in terms known to natural science, ceases to be physiology when it imports into its interpretations any psychical factor, a factor which no physical research whatever can disclose or identify, or get the remotest glimpse of." But, I apprehend, if the physiologist wishes to become an anthropologist, he must qualify himself to judge of both sets of factors. There is other science besides Physical Science, there are other data besides quantifiable data. Schleiden, a naturalist of the very first order, compares the Physical Philosopher (Materialismus der neueren deutschen Natur wissenschaft, p. 48), who is not content with ignoring, without also denying the existence of a science based on the consciousness, to a man who on looking into his purse and finding no gold there, should not be content with saying, "I find no gold here," but should go further and say "there is no such thing as gold either here or anywhere else." It is interesting to note that here in Oxford till within a few years of the present we narrowed the application of the word "Science" in what seems now to be a curiously perverted fashion. For, ignoring all the physical world as entirely as though we had been already disembodied, we used the word to denote and connote only logic, metaphysics, and ethics. By a "student of science" in my undergraduate days was meant a student of the works of Aristotle, Kant, and Sir William Hamilton. The wheel has since made somewhat of a circle; our nomenclature, like much else belonging to us, is altering itself into a closer correspondence with the usages and minds of the larger world outside; the so-called "student of science" of the year 1850 is now said to go into the "School of Philosophy;" and "the student of science," as our terminology runs in the year 1868, will be found at the Museum studying the works of Helmholtz, Miller, and Huxley. I do not say this by way of triumph, but rather in that of regret, little disposed or used though I am, and hope always to remain, to regret or deprecate change as such. For there is a philosophy of both subjects, and a science also in both; and I would hope that both the one and the other might still retain a lien on the two words and the two things, nor suffer its rival to establish a claim for sole possession by its own default in exercising a right of usage.

Advocates of the dignity of man are wont to regard, or to profess to regard, with something like horror doctrines which would hint that either his bodily structures or his mental faculties, his "more pure and nobler part," may have attained their perfection in the way of gradational evolution. But it is not clear to me that the horror expressed for these conclusions is much more legitimate than the arguments with which they have been assailed by Prime Ministers and others in the Sheldonian Theatre close by and elsewhere within our precincts. For dignity rests upon responsibility—a man is worthy or unworthy, accordingly as he can or cannot make a good answer when called upon by a voice, either from within or without, to account for his conduct or for his character. And just as a man is responsible for the employment of the wealth he possesses to the Government under which he is suffered to enjoy that wealth, no matter in what way he may have become possessed of it, whether by the hereditary transmission of a family estate, or in any other of several feasible and conceivable ways, so is a man responsible for the employment of his corporeal and mental faculties, howsoever he may have been allowed to become seized of them, to that larger and largest Government under which he has his being. I believe, however, that if men would take as much and the same care in these psychological questions as the physiologist does in his experiments and observations, to overlook none of the conditions and circumstances of the entire complex of phenomena they undertake to decide upon, they would come to see that above, and often behind, but always beside and beyond the whirl of his emotions and the smoothly-fitting and rapidly-playing machinery of his ratiotinative and other mental faculties, there stands for each man a single undecomposable something—to wit himself. This something lives in his consciousness, moves in his will, and knows that for the employment and working of the entire apparatus of feelings and reasonings it is individually and indivisibly responsible. Its utterances have but a still small voice, and the turmoil and noise of its own machinery may, even while working healthily, entirely mask and overwhelm them. But if we withdraw ourselves from time to time out of the smoke and tarnish of the furnace, we can hear plainly enough that, howsoever the engine may have come together, and into its present being, the engineer, at all events, is no result of any processes of accretion and agglomeration. Science, business, and pleasure are but correlations of the machinery in its different applications and activities; we are something besides all this, manifesting ourselves to others in the decisions of our will, and manifesting ourselves to ourselves in our aspirations and consciousness of responsibility.

> "And e'en as these are well and firmly fixed,
> In dignity of being we ascend."

I have heard this line of argumentation likened to an attempt to defend Sebastopol by balloons. "Whilst you are in the clouds, your city will be taken beneath your feet." But a position, though airy, may yet be unimpregnable. There are those present who will recollect how the highest placed forts of that famous town were never taken, but continued to the last to answer shot for shot, and shell for shell, to the Allies. The attacking forces knew not the strength of those north forts till they entered them, but when they entered them they entered them as friends.

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

ACUTE NECROSIS; REMOVAL OF DEAD BONE BY THE TREPHINE.

(Under the care of Mr. POLLOCK.)

ONE of those only too common cases, in which dead bone is shut up by new growth, and requires removal by the surgeon, was operated upon by Mr. Pollock on Thursday week. The patient was a lad who had suffered from acute necrosis of the lower part of the right tibia, in which position there were sinuses leading to dead portions of the shaft. Mr. Pollock opened these up, and, with the aid of the trephine, succeeded in removing two good-sized pieces of necrosed bone. Carbolic acid, liquefied by a gentle heat and very slightly diluted with water, was then thoroughly applied to the wound. Mr. Pollock pointed out that the left femur of the boy was very greatly enlarged, a similar attack of acute inflammation in that limb having led to very great thickening. He remarked that the case was one of those the pathology of which had been well described by Mr. T. Holmes in his work on Diseases of Children. In the present case the friends of the patient had described his disease as having followed an attack of fever; but he (Mr. Pollock) had no doubt that the febrile symptoms had not been specific, but symptomatic. There had been acute inflammation of periosteum and bone, which had given rise to the constitutional disturbance. He impressed upon the students the importance, in such cases, of early incisions into the inflamed tissue. After a few days of great pain and disturb-

ance the use of the knife should not be delayed. Very possibly, on an incision being made, no pus would be found; but a very short time afterwards pus would flow, the incision allowing free space for its exit from between the periosteum and bone.

TWO CASES OF NÆVI IN CHILDREN; APPLICATION OF THE ACTUAL CAUTERY.

(Under the care of Mr. T. HOLMES.)

The first of these cases was a little girl about two years old, who had a large nævus, shaped somewhat like an officer's epaulette, upon the left shoulder. It had already received treatment of two kinds. Nitric acid had been applied on the surface with the effect of obliterating to a great extent the cutaneous portion of the nævus. On two occasions Mr. Holmes had treated the subcutaneous portion by ligature, which had been very successful in remedying the deformity. There were still, however, a great many points at which the nævus tissue was still very evident, and these he had determined to treat by the actual cautery. For this purpose he employed the highly ingenious instrument invented by Mr. Wordsworth. As our readers may remember, this consists of a steel needle, which is expanded about half an inch from its point into a good-sized bulb. The instrument is brought to a white heat by means of the blow-pipe acting on the flame of a spirit-lamp. The effect of the bulb is to store up heat, so that the needle, which without this provision rapidly chills, is kept hot a sufficient period for it to be applied a dozen or more times to the tissue. In the present instance the utility of the instrument was well marked. The nævus was pierced in ten or twelve places without the necessity of fresh exposure to the flame. The second case was that of a young infant with a nævus on the face, near the outer angle of the right eye. On a previous occasion Mr. Holmes had treated this by the method recommended by Mr. Teale, of Leeds—viz., dissecting off flaps and enucleating the structure. The subcutaneous portion had been completely remedied by this treatment; but the nævus tissue had spread to a certain extent cutaneously. Wordsworth's cautery was applied to this in three or four places. Mr. Holmes remarked that the actual cautery by white-hot needles was a most valuable method of treating nævi on the face. No irritation or suppuration was set up, nor was there afterwards the disfigurement which is necessarily caused by nitric acid, which produces, as is well known, a mark of pock-like character. The ingenious cautery employed enables this method to be carried out without difficulty.

LUXATION OF THE HEAD OF THE FEMUR UPON THE DORSUM ILII; REDUCTION BY MANIPULATION.

(Under the care of Mr. HOLMES.)

One night, a week or two since, a powerful man was brought into the hospital with what proved to be dislocation of the femur upon the dorsum ilii. Mr. Holmes chanced to be present, having been engaged in operating upon a case of strangulated hernia. He resolved to try to effect reduction by manipulation. The leg was first firmly flexed upon the thigh, the limb then abducted as widely as possible, and finally, by a little rotation, the head of the bone was easily manipulated into its position. No pulleys or extension of any kind was needed.

MIDDLESEX HOSPITAL.

THE RELIEF OF PAIN IN OPEN CANCER.

THE field for experience in cancer at this hospital is, as is well known, an unusually large one, and opportunity has therefore been afforded for testing fairly the action of remedies in affording relief in this distressing disease. We learn that the exquisite pain which belongs to open cancer is found to be best relieved by the stramonium ointment, which is employed at this institution. The following is the formula for this in the hospital pharmacopœia:—Half a pound of fresh stramonium leaves, and two pounds of lard. Mix the bruised leaves with the lard, and expose to a mild heat until the leaves become friable, then strain through lint. The ointment thus prepared is spread upon lint, and the dressing changed three times a day.

LONDON HOSPITAL.

THE TREATMENT OF TONGUE-TIE.

By Mr. C. F. MAUNDER.

THE method which Mr. Maunder has been in the habit of employing to remedy this malformation is to tear or lacerate the membrane with the forefinger. The finger is, of course, introduced into the mouth to ascertain the existence of the deformity, and this is no sooner recognised than pressure directed downwards and backwards towards the floor of the mouth (the finger-nail resting on the frænum), tears the latter, and the object is effected. This means, Mr. Maunder remarks, is very simple, can be carried out under the veil of making a digital examination, and as no surgical instrument is employed, is highly acceptable to mothers.

Provincial Hospital Reports.

LINCOLN COUNTY HOSPITAL.

PRIMARY AMPUTATION OF BOTH LOWER LIMBS AFTER RAILWAY INJURIES; RECOVERY.

(Under the care of Mr. BROOK.)

THE following case is worthy of record, not only on account of the extent and severity of the injuries received, but also from the comparative rarity of similar cases, in which so rapid a recovery has followed upon double primary amputation of the lower limbs. We are indebted to Mr. S. Mills, house-surgeon, for the report.

James P——, aged fourteen, a schoolboy of that city, admitted January 4th, 1868, at twelve o'clock at noon. Was brought into hospital on a stretcher by the Great Northern Railway officials, from whom it was understood that the boy had been run over about half an hour before by an engine at one of the railway street crossings. The poor boy had only just reached the middle of the "crossing," when the engine came up, knocked him down, and passed over both his lower limbs, smashing his legs to atoms as high up as the knees. The boy's trousers and boots were cut into strips, and mixed up with the broken fragments of bone and mangled soft parts of the legs; in fact, the mutilated members were entirely separated from the rest of the body by simply cutting through some narrow portions of skin with a pair of scissors, just below each knee-joint. This procedure was rendered necessary before getting him into bed, for, so to speak, each mangled mass seemed to be already quite separated from the body.

There was no immediate hæmorrhage; and it was stated that he had lost very little blood from the first. He was sensible, very pale, and surface of body generally cold and pallid. Pulse small, and very quick. Had had a quantity of brandy given him already. He was put to bed, and hot bottles and restoratives applied. Consultation called immediately.

Consultation met at 1 P.M., an hour after admission, when the boy's pulse was found to be pretty good, and a moderate amount of reaction to have set in. Chloroform was given, which was taken well. Mr. Brook then first amputated the right limb in the middle third of thigh, as the injuries were found to extend higher up than on the other leg, the skin, and soft parts generally, being separated, and considerably bruised for some distance above the knee-joint. The circular mode of amputation, with skin flaps, was adopted. Very little blood was lost during this operation, and the boy continuing well under chloroform, the left leg was next amputated at a point immediately below the knee-joint (opposite the tubercle of the tibia); in this case semilunar skin flaps were made, and circular amputation through the muscles. The boy did not feel any part of the operation, and his pulse continued good all through. He was in good spirits, and talkative, immediately after the completion of the dressings. An opiate of twenty drops of laudanum given in a little brandy-and-water soon after the operation.—9 P.M.: Has been very restless, tossing his arms and head about most of the afternoon. Has been sick twice, most likely from the chloroform. Pulse pretty good, 128. Has had small quantities of weak brandy-and-water at intervals; the opiate draught given at noon was thrown up again. To have a third of a grain of morphia in solution at once. Ice to suck *ad lib.*

Jan. 5th.—Had a moderately good night, sleeping for long intervals at once; has passed urine; cheeks flushed; pulse 130; respirations 29; very thirsty; slightly delirious at times; expression of face rather wild; sharp reaction has set in. Ordered a saline mixture of effervescing citrate of potash, with a little chloric ether, every four hours, and to repeat the morphine draught at bedtime.

6th.—Passed a quiet night; pulse full and bounding, 122; less rambling and talkative; aspect of face quieter; stumps feel nice and cool, so were left undisturbed. To have a purgative of jalap and calomel, as bowels have not been relieved; continue brandy, two ounces daily, and slop diet.

7th (the fourth day).—Dressings removed, and both stumps found to look exceedingly well; slight suppuration from both wounds; no blush. Dressed the same as before with strips of lint soaked in weak solution of carbolic acid (1 to 40) lightly applied. Bowels have been relieved; takes plenty of light nourishment in way of beef-tea, milk, and arrowroot; everything doing favourably.

9th.—All the wire sutures were removed from both stumps this morning. A portion of the thigh stump has healed by first intention. There is a narrow limited line of slough in the anterior flap of the leg stump, just over the end of the tibia; the rest looks very well. To have a mutton chop to dinner, and an egg night and morning.

12th.—The narrow strip of slough has separated from the leg stump; both stumps granulating nicely. Continue same dressings.

17th.—Doing continuously well; the last ligature in each stump removed this morning; the thigh stump will soon be healed. To have the ordinary diet and half a pint of beer.

Feb. 10th.—Both stumps have been healed up for some days now. He is dressed in a long dressing-gown, and travels about the ward in a sitting posture, pushing himself along the floor by means of his hands.

Discharged cured; five weeks.

The great difficulty which presents itself, now the poor boy has got well, is, what is to be done with him. Money has been raised for the purchase of artificial limbs; but as yet he has not finished growing, so that it would not be wise to adapt them at present, even if it prove an easy matter to fit him with both a thigh and leg on the one side, and a leg on the other, which together would enable him to walk without the aid of crutches.

OPENING OF THE THAMES EMBANKMENT AND THE ABBEY MILLS PUMPING STATION.

THE inhabitants of the Empire are to be congratulated on the completion of the first instalment of the Thames embankment. Instead of thirty-seven acres of black mud redolent of putrid offal and slimy deposit from the sewers, there is the widest footway in the metropolis, bounded on the one side by the river, now cleansed from the greater portion of its foul impurity, and on the other by an open space, which, if not yet available for traffic, forms a reservoir of pure air, which enables the promenader to enjoy the scene around. It was high water when Sir John Thwaites declared the footway open, and there was not a person present who did not appear proud of the noble river, and of the splendid works in imperishable granite which now confine it within its narrowed bounds. On arriving at the Temple pier, the party of ladies and gentlemen who had been invited to attend the ceremony embarked on board two river steamers, and proceeded to the pumping station at Abbey Mills. Here the elegance of the structure, the finish of the interior, and the superb machinery called forth a burst of universal praise for the engineer who had devised this gigantic work, for the constructors who had brought it to a successful issue, and for the Board of Works, which, founded on the principle of municipal representation, had exercised the boldness of taxing its constituents to the extent necessary for the execution of such a costly scheme.

We must refer our readers to a descriptive pamphlet published by Mr. Bazalgette for the details of the construction. It will be enough for us to offer a short exposition of the work these pumps will do, and a few remarks on the results which may be anticipated therefrom.

There are eight engines, each of 142-horse power, arranged symmetrically round the centre of the building. There are two double-action pumps attached to each engine, and it is estimated that the maximum amount of sewage and rainfall which these engines will be required to lift is 15,000 cubic feet per minute. The pump well, or storage for the sewage, occupies the whole basement of the engine-house, and is capable of holding a million and a half gallons. It is filled from an enormous sewer, itself a reservoir, which extends as far as the Tower. Before admission to the well, the sewage is strained of any extraneous matters which may be brought down with it, and which would either not pass or would be detrimental to the pump-valves, by means of cages of wrought-iron bars, which can be lifted out and emptied when full. The catch consists principally of dead dogs and cats; and it is somewhat curious that whilst butchers' offal and corks are found abundantly in the sewage from the higher levels, there is neither the one nor the other in this, which is derived from the districts north and north-east of the Tower, where the offal forms a part of the people's food, and where casks, not bottles, usually contain their drink. Even in the hottest weather the sewage has but little smell. It is dark and offensive-looking, and, to all appearance, much too concentrated for direct application to the land. At the present time, one engine working constantly and another for a few hours at night discharge all the sewage. But when the Thames embankment is completed the whole of the drainage of Acton, Hammersmith, Fulham, Shepherd's-bush, Kensington, Brompton, Pimlico, Westminster, the City, &c., will have to be raised from the low-level sewer, a height of about thirty-six feet. The pumps themselves are double, and act both by suction and forcing. By the first they raise the sewage seventeen feet, and by the second they force it upwards nineteen feet; every precaution being taken to secure uniformity of delivery, and to prevent undue pressure on any of the parts.

The engines were set in motion by Lord John Manners, Lord Ebury, the Hon. W. Cowper, M.P., and Sir John Thwaites. They moved with an impressive slowness, and as smoothly as the truest carriage-wheel upon a railway. There was no heating of the joints, and in the course of a quarter of an hour a sensible impression was made upon the sewage which had been allowed to accumulate in order to afford them opportunity for action. These superb works are a complete success; they are worthy of the metropolis, and they form the first step for the solution of the great problem of the day. To Mr. Bazalgette the thanks of the community are due for the patience and skill he has displayed, and we hope that, having concentrated the refuse of this teeming population within manageable limits, he will now turn his serious attention to the question, "What is to be done with it?"

TREATMENT OF FRACTURES.

To the Editor of THE LANCET.

SIR,—In this week's LANCET, Mr. Winchester comments on a clinical lecture of mine on "Simple Fractures of the Femur."

It is not my habit to notice criticisms that are made on views that I entertain on subjects that admit of a difference of opinion; and I should not have departed from this habit on the present occasion had it not been for a remark made by Mr. Winchester, in which he oversteps the bounds of ordinary, of liberal, and, I may add, of courteous criticism.

Mr. Winchester says, "If Mr. Erichsen is not too far blinded by prejudice, he may yet do," &c.

To accuse a teacher and a writer of being "blinded by prejudice" is a serious imputation on his character in both capacities; it is one that I will not, in justice to myself, allow to pass unchallenged, and it is one that is in the present case as unjust as it is untrue and uncourteous. It is peculiarly unjust in the present instance, because the whole object of the lecture, by showing that fractures of the femur may be advantageously treated by different methods, is the best proof that I am not prejudiced in favour of any one.

It is untrue for the same reason that it is unjust; and it is uncourteous because it intrudes personal imputations of an offensive character into what ought to be a scientific discussion.

I am, Sir, your obedient servant,

JOHN E. ERICHSEN.

Cavendish-place, Cavendish-square,
Aug. 1, 1868.

STRANGULATED CRURAL HERNIA IN A CENTENARIAN; OPERATION; RECOVERY.—M. Labbé, surgeon to the Paris Salpêtrière (asylum for aged women and the insane), lately had to operate upon a woman 105 years of age for the above complaint. The wound suppurated for about a week, and the patient made a good recovery.

THE LANCET.

LONDON: SATURDAY, AUGUST 8, 1868.

THE meeting of the British Medical Association which has been held during the week within the classic precincts of Oxford has proved, both scientifically and socially, not unequal to the meeting of last year in Dublin. As we anticipated, the locality has been found attractive, and consequently a larger body of practitioners of medicine has been brought together than at any previous meeting of the Association—we hope with commensurately important results. Oxford at any time has attractions of its own sufficient to allure the lover of architectural beauties; but when the hospitality of its rulers and the welcome of its halls are superadded to that pleasant combination of work and holiday which a scientific meeting of English gentlemen always affords, there is no difficulty in accounting for the well-attended medical congress on the banks of the Isis.

In another portion of THE LANCET will be found a detailed report of the proceedings of the meeting up to the hour of going to press, and we publish also an abstract of Dr. ACLAND'S presidential address, together with the addresses of Professor ROLLESTON and Dr. GULL in full. We rejoice to find that Dr. ACLAND'S address has been duly noticed in the leading daily journal, since the public is wofully ignorant of the relation of modern Medicine to modern Science, which forms the subject of it. As the President well put it, "Medicine has too long consented to regard itself as an art as distinguished from science. It cannot wholly fulfil its function till it asserts, and has entirely substantiated, its claim as one of the band of sciences that precisely interpret the phenomena of nature." We cannot but thank Dr. ACLAND for his earnest effort to uphold the status of the profession of which he is so distinguished a member, and to show to the world that medical men are not mere philosophers without a conscience and without a creed, but men of warm hearts and good understandings, who are constantly striving for the good of the community, amid many rough rebuffs, at considerable personal sacrifice, and with little hope of recognition or reward.

We will reserve the eloquent addresses of Drs. GULL and ROLLESTON and the more strictly professional subjects of the meeting for future consideration, but we must say a word in praise of the general arrangements of the meeting, which reflected the greatest credit on the local secretaries, Dr. GRAY, Dr. TUCKWELL, and Mr. CHAPMAN. In addition to the sections for Medicine, Surgery, Physiology, and Midwifery, which worked so satisfactorily last year, a special section for the discussion of matters connected with Public Health was opened under the presidency of Mr. SIMON, and proved a great success. The University of Oxford has not been backward in the recognition of the claims of some of our leading men to its honorary degree of D.C.L.; and no one can say that the list included any but worthy names, though it would have been easy to add to it, especially from the distinguished ranks of the profession of the sister countries.

We congratulate the Association and its President on the success which has attended the meeting at Oxford, and have little doubt that the surgical worthies of Leeds will do their best to emulate these successes next year. To those who have made Oxford the commencement of a vacation ramble the reminiscence of friendly meetings and hearty greetings will probably be the most pleasant burthen they can carry with them; whilst those who, after their brief "outing," are returning to the routine of professional labour, will feel inclined to dwell rather upon the scientific truths they may have imbibed, whilst they look back with pleasure upon their too brief emancipation from anxiety and toil. Both classes will allow, however, that their pilgrimage to the ancient city of Oxford was not without result.

IN some recent articles we called attention to the military medical service of our own country; and we said that the American and continental nations either had already remodeled, or were about to remodel services which had proved inadequate to bear the strain and fulfil the requirements of modern warfare. Continental nations have to depend almost entirely upon the perfection of their military system and the strength of their armies for their position, and every effort is made to develop their military resources and secure departmental efficiency. If they do not enjoy the advantages of an insular position, they are not hampered by our numerous colonies. We have watched with much interest, therefore, the course pursued by Prussia. Prussia is a strong nation: her people know their own minds; they set about their work very deliberately and laboriously, but they do it *thoroughly* on the whole. In all armies, reorganisation of the medical service has been brought about by the exigencies of modern warfare; and it has been proportional to the degree of scientific attainments and practical ability of the medical men engaged.

In 1852 the medical profession in the Prussian army was much improved by a Warrant which rendered it necessary that all medical officers should pass the requisite examinations of a Doctor of Medicine, all other kinds of medical and surgical licenses being abolished. This, of course, would not be possible in this kingdom, where an entirely different system exists for granting medical licenses and degrees by numerous examining bodies and universities—a system so complicated and strange, and so at variance with that pursued on the continent that no foreigner can be made to comprehend it. By this measure a corps of well-educated men was created; but great deficiencies in the effective number of medical men existed, in consequence of their unsatisfactory position in the army. In 1863 medical officers were placed at the head of field hospitals, with the whole responsibility; but a combatant officer performed all disciplinary duties under their orders. In every respect medical men in the army were regarded as belonging to the civil departments.

Such was the organisation under which the campaigns in 1864 and 1866 were carried on. The necessity of a perfect reform was shown on both these occasions.

It was on the score of humanity, and owing to the interest taken by the QUEEN, that a committee was appointed in 1867 for the reorganisation of the medical service in the Prussian army. We need only give the names of LANGENBECK, LŒFFLER, STROMEYER, WILMS, and WAGNER, to show that the highest authorities in medical science were called together

for this purpose. The warrant of the 20th February, 1868, was the consequence of their report. By this a sanitary corps is created, which is to include the medical officers of the army and navy. This corps no longer belongs to the civil departments of the army, but its officers are classified with combatant officers, without, however, giving them the names and titles of combatant officers. The following gives a short view of the establishment, including the medical officers of the whole North German Confederation (except the Grand Duchy of Hesse, Saxony, and Mecklenberg):—An indefinite number of Sub-Assistant-Surgeons* (ranking as Sergeant-Major); 397 Assistant-Surgeons (Ensign); 266 Assistant-Surgeons (Lieutenant); 317 Surgeons (Captain of 2nd class); 155 Surgeon-Majors (Captain of 1st class); 52 Surgeon-Majors (Major); 10 Inspector-Generals (Lieutenant-Colonel); 4 Inspector-Generals (Colonel); 1 Director-General (ranking as Major-General).

The ranks are not so high as in the English army, but this is not considered a disadvantage, because the rank of surgeon-major, for example, being the same as that of the commanding officer of the regiment, is likely to lead to difficulties. The article corresponding to clause 17 of the warrant of our own army concerning military honours &c. closely resembles it.

There is, however, one very important point conceded to medical officers in the Prussian Warrant—namely, the disciplinary power over all men of the hospital service, army hospital corps, purveyors, apothecaries, nurses, &c. Every hospital has at its head a principal medical officer. Combatant officers have nothing to do with the hospitals; medical officers are alone responsible for them. The amount of power and authority accorded to army surgeons is regulated by rank and seniority, diminishing of course as we descend from the General Stabs Arzt, who possesses powers equivalent to those of a general in command of a division, to the subordinate ranks of the department. In all that relates to his own service, the Prussian medical officer is therefore vested with and exercises full disciplinary powers.

In all other directions there are the same institutions for combatant and medical officers alike. Sub-assistant surgeons, before being gazetted assistant-surgeons, must be selected by their brother officers. In this way, a man's character as a gentleman is considered as well as his professional qualifications.

All medical men can be employed by the Director-General wherever he wishes—a directly opposite system to the regimental one. Leave is also granted by the medical superiors, the commanding officer simply expressing his opinion.

On reviewing the whole matter, we must say that a very important step has been taken in Prussia. The medical officers have not attained the position they have in America; but there was no tradition to overcome in that country. The Prussian medical officer does not obtain all the rights of combatant officers as concerns the presentation at Court, equal claims to forage, military funerals, &c.; but they cannot fail to obtain these rights at some future period. There yet remains an Army Medical School to be organised for the special instruction of medical officers, and from what we can gather, this will, in all probability, be constituted very much upon the model of our own establishment at Netley. We venture to think that these reforms cannot fail to lend an impetus to other countries. Military medical interests are the same all over the world. "Until now," says a Prussian medical officer in writing to us, "we looked upon England as having the advantage. At present, we think there are some points in which you Englishmen, always so hospitable towards foreigners, might imitate us with benefit."

* Young medical men performing the duties of assistant surgeon during the first year of compulsory military service.

THE mode of election to the Fellowship of the College of Physicians having this year attracted unusual attention, and it having been declared on the highest authority (that of Sir THOMAS WATSON) that the whole matter requires reform, it may not be out of place to contrast the mode by which Fellows are made in Pall-mall with that which obtains at the sister institution in Lincoln's-inn-fields.

At the College of Physicians, the Council select the names of Members whom they think fit and proper persons for the Fellowship; and this list is practically enforced upon the body of Fellows, who perform the functions of electors, but have nothing really to do with the nomination of those they elect. At the College of Surgeons (setting aside the Fellowship by examination, to which the Membership of the Physicians is strictly the analogue), the election rests with the Council, but the nomination with the whole of the Fellows of the College. Any Member of the College of Surgeons whose diploma dates prior to 1844 is eligible for the Fellowship, provided he is a person of respectability, and can produce a *testamur* signed by six Fellows of the College as to his professional character and reputation. The Council of the College of Surgeons possesses the power, it is true, of admitting annually to the Fellowship two Members of twenty years' standing; but that right has never yet been exercised, though it not improbably may be in course of years. It will be seen, therefore, that—at present at least—the practice of the two Colleges is diametrically opposed, and there can be no doubt which is the more unpopular at the present moment. The motion so ably brought forward by Dr. WILLIAMS strikes at the root of the present system of hole-and-corner nomination, and practical exclusion of the Fellows from their rights. We would suggest an assimilation to the practice of the College of Surgeons, in requiring the signatures of at least six Fellows to any nomination for the Fellowship, since a man's course of practice cannot be very flagrant if it is unknown to six Fellows of his College. It might still be open to the Council to communicate privately with the recommenders of any gentleman who might be considered by them ineligible, suggesting the withdrawal of the name of the candidate, as is done, we believe, occasionally at the College of Surgeons; but we imagine few, if any, such cases would arise. Without question, some means must be taken at once to clear the Fellowship of the College of Physicians from the stigma which now attaches to it; since, at present, an "ingenuous youth" of half a dozen years' standing as a physician is almost invariably preferred to men long his seniors—we will not say his betters—who are actively engaged in the successful practice of their profession.

THE Poor-law medical officers are to be congratulated upon the restoration of an organisation for the protection and promotion of their interests, which has now been for some years in abeyance from the impaired energies of that indefatigable

reformer, Mr. RICHARD GRIFFIN. Renewed co-operation has not been determined on one moment too soon. No one else will help them if they do not help themselves. Powerful as is the organisation of the British Medical Association, it has never fairly exerted its influence in their behalf, and it is notorious that its *Journal*, instead of denouncing the new and serious oppressions to which the Poor-law medical officers have lately been exposed, has become the friendly apologist of the Poor-law Board. Nor have the medical officers any reason to look to the Workhouse Infirmaries Association for material help in advocating their interests. The object of this Association is to obtain better and more humane treatment for the sick poor, or rather for a portion of them. Its sphere of operations is very narrow, and its members have refused over and over again to widen it. The poor in workhouses form the only objects of its care. Those outside may be treated with neglect and cruelty. They may lie without nurses, fire, linen, and even the necessaries of life. Patients labouring under heart disease may be sent unheeded to the stoneyard, and die of positive neglect. And, under such circumstances, it is scarcely to be expected that the treatment of the medical officers will engage the sympathies of its members. Their aim is to obtain proper treatment for the workhouse inmates, whether it be at the expense of guardians or doctors is of little consequence. This object supposed to be promised or attained, "Othello's occupation's gone." He retires upon his laurels, and it is most improbable that his voice will be heard in protest against the unequal treatment which has been meted out to the workhouse medical officers of the metropolis, against the non-fulfilment of those promises which were made to the profession by the late president of the Poor-law Board, and some of which are embodied in his Bill; nor against the unsatisfactory position in which the medical officers have been placed by having had the duty of inspection thrust upon themselves, without extra pay.

Nor can anything be expected from the Earl of DEVON and the Poor-law Board. There is talk enough about the necessity of adequate remuneration, and the unreasonableness of medical officers being expected to work for miserable salaries; but for years past they have never issued a single order for the raising of a salary, whilst they have refused it often. We record to-day a palpable instance of their injustice to the medical officers of Mile-end. These gentlemen are debarred from private practice. Their duties since their appointment have nearly doubled. They are very severely worked, and even the guardians thought it right to increase their salaries from £200 to £250 a year. The Poor-law Board have absolutely refused their sanction to the increase, apparently without even the reasonable courtesy of saying why.

Let, therefore, the Poor-law medical officers rely upon themselves and the justice of their cause. Let them state fairly that, under existing arrangements, their work cannot be satisfactorily done; that they earnestly desire to do it in a manner which shall reflect credit upon themselves and our profession, with advantage to the sick poor, and, more than all, with a prospective positive economy as regards those who have to find the means. Nor should the present political crisis be lost sight of. Let the true state of the case be laid before the candidates for election to the approaching Parliament. Let the evils of Poor-law administration, which are better known to the profession than they are to theoretical politicians, be forced upon the attention of would-be members; and let a promise be exacted that, in the interests of the entire community, the causes of pauperism and its increase shall receive a new investigation, when its intimate association with sickness will be clearly demonstrated. In this the Poor-law medical officers have a right to rely, not only on the help of their professional brethren, but on that also of the emancipated working classes, who are even more deeply interested, because, by unforeseen misfortune, they may need to come into the pauper class themselves.

Medical Annotations.

"Ne quid nimis."

THE SICK-CLUB QUESTION.

In THE LANCET of July 25th, in the list of medical appointments, occurred the following announcements:—

"Collins, P. T., L.F.P. & S. Glasgow, has been appointed Medical Officer to the Friendly Benefit and Provident Societies in the towns of Wednesbury and Darlaston."

"Kerr, D., L.R.C.S.Ed., has been appointed (in conjunction with Mr. Collins) Medical Officer to the Friendly Benefit and Provident Societies in the towns of Wednesbury and Darlaston."

Under ordinary circumstances such appointments are matters of congratulation. We regret exceedingly that we have no congratulations for Messrs. Collins and Kerr in regard to their respective appointments. Our readers know what a firm stand was taken a few months ago by the medical men of Birmingham and its neighbourhood in regard to the question of remuneration for medical services to clubs. We have reason to believe that their conduct was approved not only by the medical profession generally of the town and neighbourhood, but also by many outside the profession. Their example has been followed by medical officers of clubs in various places, and amongst others in Wednesbury. In this town of Staffordshire the club surgeons acted unanimously, and refused to continue attached to any club that did not agree to the advanced rate. The clubs of the town and neighbourhood were very large, and yielded a considerable income, probably £2000 a year. Still the question was one of principle and justice, and, entirely concurring in the reasonableness of the claims of their Birmingham brethren, they resolved to demand the same remuneration. What is the result? A result, alas! that is too familiar to all who have had much experience of attempts to raise medical service in the estimation of society. Other men took the places of those who as a matter of principle had made a stand. In this case we are glad to say the new officers are strangers, not men of the place. Their conduct has naturally excited the strongest feeling of disapprobation amongst the medical men of Wednesbury, who have resolved on the only course open to them,—not to meet any consulting physician or surgeon who meets Messrs. Collins and Kerr. A similar course has been taken at Oldbury in reference to Mr. W. C. Dempsey, who, in that town, has accepted appointments from which the previous holders had been dismissed in consequence of their asking an advance in the rates of remuneration. In the latter case a circular has been issued by the protesting surgeons explaining their determination not to meet any physician or consulting surgeon who will not refuse to meet this gentleman. This is a sad story, none the less so for being an old one. Of course, this is a free country, and men may dispose of their services on any terms they please. But there is a strong moral obligation upon all professional men to decline to give professional services on terms which the great majority of their brethren think to be inadequate. This is the tacit law which determines all our fees, and without which no respectability of status can be maintained. We may

leave the question between those gentlemen who have vacated important appointments at the instigation of a principle and those who have stepped so eagerly into their places to the general judgment of the profession and the public. We entirely concur in the propriety of the course taken by the retiring officers. Clubs will soon find reason to doubt the wisdom of dismissing old servants and taking new ones on the simple ground that they can be had a little cheaper. And the public will see the necessity for clubs discontinuing terms which never were adequate, and which now are entirely incommensurate to either the wealth of clubs or the worth of medical services.

THE UNIVERSITY OF EDINBURGH.

WE are glad to see that Professor Christison has felt the force of some considerations which we urged last week. He has resigned the chairmanship of the committee for the election of a legal candidate for the University, in consequence of his having been temporarily appointed Vice-Chancellor of the University of Edinburgh for the administration of the new Reform Act. He would have done better still to have declined the Vice-Chancellorship itself, considering the extent to which he is implicated in the present strifes of the University. Sir John M'Neill, M.D., has consented to act as chairman of Mr. Swinton's committee.

THE ARTISANS' BILL AND OFFICERS OF HEALTH.

THE amendment of the clauses of the Artisans' Bill having reference to officers of health is very imperfect. It only provides that in places not yet having an officer of health, and proceeding to appoint one in terms of the Act, the appointment and removal shall be subject to the approval of the Secretary of State. According to this clause, the Secretary of State will have no voice in the appointment or removal of the most important officers of health in the country, such as those of London, Liverpool, and Manchester. Moreover, the clauses defining an officer of health remain as before, according to which such an officer is not necessarily a medical man.

THE MEDICAL OFFICERS OF MILE-END AND THE POOR-LAW BOARD.

THE guardians of Mile-end, having resolved to increase the salaries of the medical officers—who devote the whole of their time to the poor, and are debarred from private practice—from £200 to £250 a year, submitted the proposal for the sanction of the Poor-law Board. The *East-End Observer* now reports that the clerk read a letter to the guardians at their last meeting stating that the proposed increase could not be sanctioned. On this question a long conversation ensued, in which the Chairman remarked that the Poor-law Board were clearly becoming the guardians' masters, and if the guardians were to be governed by the Poor-law Board, he for one would not submit to it. Mr. Kennedy said it was a matter of surprise to him how educated men could be expected to devote their whole time to the duties of their office and live respectably on £250 per year. Mr. Moody thought there must be something concealed from the Poor-law Board or they could not have taken the tone shown in their letter. Mr. Day said the population had increased to a very great extent, and with that a corresponding increase of sickness. After some further remarks *pro* and *con.* a deputation was appointed to wait on the Poor-law Board on the subject.

THE FATAL ACCIDENT AT MANCHESTER.

IT is earnestly to be hoped that the painful occurrence on the 31st ultimo at Lang's Victoria Hall, Manchester, will direct attention to the fearful insecurity of public places of amusement as they are at present constructed. One cannot help being struck by the curious anomaly that, whilst the medical profession is constantly labouring, often against the strongest opposition, to prevent the disease which it is their part to treat, our architectural brethren, who are entrusted with the erection of these large buildings, are either unable or unwilling to perform their first duty of making them fit for the reception of the crowds which they are built to accommodate. We believe that there are not two theatres in London from which there is a safe egress in the event of fire. And if the visitor to our places of amusement is usually fortunate enough to escape the horrors and danger of a sudden panic, with its certain loss of life, he is never free from the risk to health belonging to the miserable ventilation which distinguishes these buildings.

The accident room at the Manchester Royal Infirmary presented a dreadful spectacle on the night of the 31st ult., after the catastrophe at Lang's Victoria Hall. The floor was covered with the bodies of the injured and dead. Those who were badly hurt were at once sent upstairs into the wards, and there attended to, whilst the corpses were removed to the out-patient rooms to await identification. Twenty-three corpses were received. The sufferers who were slightly injured, and these presented generally contusions and sprains of the ankles and wrists, received attention, and were sent to their own homes. Mr. Theodore Fennell, house-surgeon, who has obliged us with particulars, remarks that on the bodies brought in dead there were no marks of direct violence, though they began to discolour before the lapse of many minutes, chiefly about the face and upper part of the chest. In five or six cases there was slight hæmorrhage from the nose and mouth. No fractures were to be found either of the limbs or ribs. Twelve cases (ten males and two females) were sent into the wards. Of these all were suffering from collapse from extreme pressure of the chest, with the exception of a boy fourteen years old, who had concussion of the brain, and laceration of the ear. The faces and chests of all were red and congested, and the conjunctivæ injected. On the following morning nearly all were suffering from slight headache and retention of urine, and the faces of all presented the peculiar mottled appearance so often noticed as a result of severe pressure upon the chest. It is expected that all the cases admitted will do well.

We may note that no case of fracture of the limbs or of the ribs was observed either amongst the killed or wounded, and it is believed that this is due to the elasticity of the walls of the thorax in the sufferers, who were, with two exceptions only, under twenty-one years of age.

MAURITIUS.

WE learn from our correspondent that considerable difficulties exist in the way of carrying out an effective drainage of the town of Port Louis, owing to there being no place, except the harbour, into which to convey the sewage, and this is said to be going on at present to the great detriment of the health of the people. The tide is insufficient to sweep the matters out into the sea. The outfall is very slight, and covered drains would be constantly getting choked. Mr. Longridge, an engineer, has proposed to pump out the sewage to a distance, and convert it into manure. Perhaps the dry-earth conservancy system might prove practicable. This would obviate the difficulty of disposing of the animal ordure. The malarious character of the soil, however, can only be overcome by its cultivation and drainage. The health of the inhabitants of the Mauritius generally does not seem to be improving in any degree. The mortality during May has exceeded that of the preceding month, and the fever existed at Mahebourg, Savanne, Pamplemousses, and Port Louis. The local Commission, as far as we can make out, has done next to nothing. Notwithstanding the efforts which have been made by influential merchants in this country to press upon the Secretary of State for the Colonies the necessity for an Imperial Commis-

sion, composed of medical and scientific men who had made sanitary science their study, and who were unaffected by foregone conclusions and local prejudices, nothing has been done, and the inhabitants are beginning to despair of any aid from the mother-country.

THE GOVERNMENT NO GOOD SAMARITAN.

WE understand that a boy was recently thrown from a waggon opposite the Herbert Hospital, and that the wheel passed over the lower extremities, by which he sustained a severe compound fracture of the thigh, with injury of the hip. He was taken into the hospital, and the circumstance reported. The medical officer, however, who admitted the unfortunate lad was informed, we are told, by the military governor, that no civilian was permitted to receive treatment in a military hospital, and that the medical officer must take the responsibility of the boy's admission. The end of it was that the police surgeon of the district was sent for, and it was at length determined to send the patient to Guy's Hospital, which, however, the poor lad never reached, as he died on the road. We give this as we heard it, and if there be no mistake, the occurrence calls for some inquiry.

There appears to us to have been a fear of responsibility such as amounted to positive inhumanity. What is the good of a governor at all in a military hospital if he cannot take upon himself a little authority and responsibility. If the War Office positively refuse admission into their hospitals to a civilian under any pretext whatever, it is time, we think, that the public should make the War Office and other military authorities understand that military hospitals are provided out of the public money, and that the Government and its servants are bound to discharge their duties with a regard to humanity as well as economy.

A NEW TEST FOR BLOOD-STAINS.

WE were informed recently that a medical practitioner at Geelong, Australia, had discovered a new method of testing for blood, which was of a very delicate character. It consists in the application of an ozonised ether and tincture of guaiacum. As we have personally tried the experiment with some tests supplied to us by Messrs. Savory and Moore, and with success, the information may prove interesting to our readers. It appears to be very delicate, and, consequently, requires that the amount of blood should be small, and in a very thin layer—the merest stain,—otherwise the blue colour which is developed becomes so concealed by the colouring-matter of the blood as to be inappreciable, except around the edge of the blood-stain. By applying, however, the above agents separately to blood-stains on a handkerchief, we did not ourselves fail to produce a characteristic blue colour.

CAPPING DAY AT EDINBURGH.

SIR JAMES SIMPSON may have a defective appreciation of the older classics, but in his power of using English he is not excelled by many medical men living. On Saturday last, the 1st of August—that historical day in the memory of all Edinburgh graduates,—he addressed the newly capped candidates in a style which was in all respects characteristic. It was lively; hopeful, almost sanguinely so, of science; anecdotal; human; and withal faithful and genial. There were the ordinary yet proper commonplaces of such an address, but even these were so associated with stories of actual life as to lose their dryness and tediousness. John Hunter's answer to the pupil who asked him what books he was to read—leading him into the dissecting-room and pointing to several bodies—"these are the books you must learn under my direction, the others are fit for little;" Dr. Physick's experience as to the slowness of success—"I walked the pavements of Philadelphia, after my return from Europe, for nearly three years, without making as much money by my practice as put soles on my shoes;" the same surgeon's ultimate fame, and that of similar examples adduced; the instances of Sir James's friend, whose letters of introduction failed, and whose only introduction was the successful treatment of a few patients; the case of Dr. Fothergill, who came to reputation among the rich by his medical care of the poor—who, though of eminently pure reputation, could truly say, "I crept over the backs of the poor into the pockets of the rich;"—these illustrations are all so full of point and life as to make moralising pleasant. As Sir James went over the roll of illustrious medical men who have lighted up the world with their happy insight into the mysteries of nature, he must have made the young graduates proud of their profession and hopeful of the future. Galileo, Galvani, Jenner, were all enlisted for the purposes of illustrating how near great truths are to those who have the eye to perceive them. Like most men of a discovering turn of mind, Sir James is very sanguine as to the fruits that are to be gathered by earnest workers with any vision in medicine and the allied fields of labour. Most persons of a less sanguine mind will be apt to think that in this part of his address he exceeded the bounds of the reasonable. He justly urged the advantages that may be hoped for from attempts to multiply our means of physical diagnosis. "*Possibly even, by the concentration of electrical or other lights, we may yet render many parts of the body, if not the whole body,* sufficiently diaphanous for the inspection of the practised eye of the physician and surgeon." He was very reasonable in expressing the hope that future great conquests are probably to be gained by researches in pathological chemistry and therapeutics. He deplored, as all good physicians have done of late, the backwardness of our therapeutical knowledge. He depicted in glowing terms the promise of result to any good therapeutical work, though in the details of his hopes only very confiding children of light will be able to share. One of his hopes is, that we shall discover means of bringing down rain at will. We only trust if Sir James makes such a discovery, he will be careful at the same time to make another—that of a means of keeping it from falling when it is not wanted.

A JUDGE ON THE CLAIMS OF MEDICAL MEN IN REGARD TO CHOLERA DUTIES.

THE claims of medical men appointed by parishes to provide against and to limit as much as possible an expected outbreak of cholera have been the subject of a most wise and just deliverance by Lord Jerviswoode, the Lord Ordinary of the Court of Session. The case, that of Kennedy *v.* Ness, was as follows:—Dr. Kennedy, of Leven, on the 28th of August, 1866, was appointed by the Parochial Board of the parish of Wemyss to act with reference to an expected outbreak of cholera. He did act promptly and energetically, making a house-to-house visitation of the district, and generally devoting much time to its sanitary conditions.

On the 28th of September, cholera broke out in Methil, within the eastern district, and subsequently became very virulent, the greater part of Dr. Kennedy's time, day and night, being occupied in attendance on cases, and in precautionary measures. This continued till November the 11th, when Dr. Kennedy himself fell a victim to the disease. His executors made a claim on the Parochial Board for £130 4*s.* for attendance, £6 for medicines, and £3 3*s.* for house-to-house visitation,—together £139 7*s.* This claim was resisted by the Board, and £50 were offered. Finally, the case came into the Court of Session. The Board's principal contention was that the remuneration should depend upon the number of cases. But the Lord Ordinary entirely objected to this principle, maintaining that remuneration would be lessened in the degree in which the prime object of the appointment was attained, namely the prevention of the spread of the disease. Further, the Lord Ordinary maintained that the Board should

not think of paying according to the measure of the poor themselves to pay for medical attendance. The last sentence in the judgment of the Lord Ordinary must have touched even the parochial heart: "Especially on such an occasion as that out of which the present case has arisen, the opinion of the Lord Ordinary is that generous remuneration is due to the representatives of a man who sacrifices his own life in the cause, and for the welfare of others; and that it would not be for the public interest that in such circumstances the defender should succeed in his contention so as to have it established as a principle that the rate of remuneration payable by a parochial board for medical attendance on the poor is to be regulated, or at least seriously affected, by the consideration of what the poor might themselves have been expected to pay. The Lord Ordinary found that the sum claimed by the pursuer was reasonable, and, further, found the defender liable in expenses."

THE NURSING AT ST. PANCRAS WORKHOUSE.

A CONTEMPORARY is somewhat premature in announcing that the lying-in ward of St. Pancras Workhouse is about to be placed under the charge of Miss Nightingale for the training of nurses. That department is and has been for some years under the management of a very skilful midwife, who is herself superintended, and occasionally assisted, by one of the resident surgeons, and we believe this arrangement is not likely to be changed. The report has probably arisen from the fact that the guardians have lately been very much dissatisfied with the present staff of nurses, and have made application to the managers of the Nightingale Training School, and elsewhere, with the view of obtaining a better class.

The question of expense is one of the chief obstacles, since it is to be feared that the prospective increase of the rates will certainly lead to violent reaction against the great improvements which have lately been effected. The guardians have, for the present, contented themselves with discharging the least efficient of their staff, and with raising the salaries of the rest. During the past winter, the advantage of an experienced nurse has been very fully demonstrated, such a person having been specially employed to attend to the children who have been labouring under epidemic ophthalmia. With unremitting attention and skilful management this formidable complaint has entirely disappeared, and the nurse has left with the respect and regret of both officers and inmates.

THE HEAT AND OUR SOLDIERS.

MR. NEATE, it may be remembered, asked the Secretary for War the other day in the House of Commons whether he had made any inquiry into the occurrence of several cases of heat-stroke among the men of the household brigade, in consequence of their prolonged exposure to the heat at Wormwood Scrubs. Some paragraphs of a similar nature appeared in several of the journals with reference to our troops at Aldershot. We are assured that the facts were exaggerated. There were, however, several men affected by the heat at both places, and we believe that the medical officers have brought the matter to the notice of the authorities with the view of getting the hour as well as the length of the parades altered.

Measles is, we understand, very prevalent among the soldiers' children, and a few cases of scarlatina have likewise appeared. The climate of Aldershot is excellent; but a camp is an unsuitable locality for children, and there is room for considerable sanitary improvement in the married quarters.

THE VACCINATION ACT IN BETHNAL GREEN.

THE guardians of Bethnal-green have retained the services of the parish beadle for three months, at a salary of £15, to superintend the operation of the Vaccination Act. A hope was expressed that his agency would be sufficient without taking legal proceedings. Truly, our friend Bumble has been promoted. It is to be hoped that his cocked hat and ancient silver staff will produce the anticipated effect upon the parents, and that the infants will not be unduly frightened by his imposing appearance. Seriously, however, is this the kind of person who should be entrusted with this important duty?

THE HEALTH OF THE QUEEN.

HER MAJESTY has undertaken her journey to Switzerland, where she intends to stay for about a month, on the recommendation of Sir W. Jenner. We stated some months since that the Queen had been subject to fainting fits, accompanied by distressing attacks of sickness. Though these to a great extent have abated, she has felt very much the heat of the weather, and this, with the unusual fatigue she has recently undergone, has produced a degree of weakness which the proposed change it is expected will remove. On her return from Switzerland, the Queen will spend some time at Balmoral.

THE GUARDS' BARRACK AT BUCKINGHAM PALACE.

SOME misapprehension as to the importance of our strictures on this barrack appears to have arisen from the supposition that the men quartered there simply form a guard which is changed daily. We therefore think it necessary to state that with respect to thirty-seven men this is not the case. They remain for six months together in the same room, under the unfavourable conditions we described.

ARMY MEDICAL SCHOOL: CLOSE OF THE SESSION.

THE summer session of the Army Medical School was brought to a close on Monday, the 3rd inst. There was a very hot competition for the Herbert Memorial Prize, this being the first time it was given, between Dr. Cunningham, of the University of Edinburgh, who took the first place for Her Majesty's Indian Service, and Mr. Lewis, of University College, who occupied the same position on the list for Her Majesty's British service. The former was the successful competitor, but both were greatly distinguished, the difference as regards Netley studies being small. The above gentlemen are those selected by the professors, with the sanction of the Secretaries for War and India, to proceed to Germany to study the so-called cholera fungus theory, under Professor Hallier, of Jena, and Dr. Barré, of Halle. Drs. Whitwell and Cameron, of the Indian Service, were also brought specially to the notice of the Secretary of State for India. Dr. Dobson took the second place in the British list. It was remarked that in no previous session had so many changes taken place, the men who were content to repose on laurels won at Chelsea having to give place, in many instances, to those who at Netley redeemed the time.

At the close of the proceedings in the lecture hall, the Director-General addressed the young medical officers who had just won their commissions, in very genial and hearty terms. In referring to the services of the late Lord Herbert of Lea, Dr. Logan said he claimed for the medical officers of the two services the position of having been pioneers in sanitary science; and in connexion with the Army he would remind them of the name of Jackson,—a man far in advance of the ideas of his own day, and, in fact, one of the greatest sanitarians of that or any other period. Speaking of the important nature of their future duties, he exhorted them to maintain a high standard of conduct, professionally and socially, to have respect for discipline, and to direct their ambition towards making their own rank, in preference to engaging in useless wrangling about a relative rank. Predicting, as he did, a creditable and useful career for them, he

could not shut his eyes to the many temptations to which they would be exposed; and that of intemperance was one—a vice bad enough in any one, but utterly inexcusable in a medical officer, who ought to be an example of that temperance in all things without which we can neither guard the body against disease and injury, nor treat it when they occur.

Major-General Wilbraham followed in the same strain, and the day's proceedings ended with a pleasant dinner at the Army Medical Staff mess.

EPIDEMIC AT GUILDFORD.

THE town of Guildford is again a prey to an extensive epidemic. It appears from the accounts in the local papers that scarlet fever is this year causing as much sickness and distress as typhoid fever did last year. The present epidemic has been more fatal than the one in 1867, for there have been fourteen or fifteen deaths already; whereas after the fever of last year had been prevalent for nearly two months, the deaths were only three. The cases, too, are more numerous: last year, in about two months there were 264 cases; whereas in the present instance there have already been nearly, if not quite, 300 cases.

The causes to which it is stated that the epidemic owes its existence are, defective water-supply; the foul state of the river, which is described as "the receptacle of all the sewage of a population of 10,000 people," and as "converted into a filthy fetid stream, so black and thick and muddy that you cannot see an inch below its surface;" and the disgraceful condition of the drainage. It is reported that there are spots in the town where every abomination exists—where the wells are poisoned by the contamination of cesspools, where the cesspools are overflowing, where waterclosets close to dwelling and sleeping rooms are never flushed, and where filth and squalor abound. With such a state of things as this, it cannot be matter of surprise that the town should be visited with zymotic disease. One particular locality is referred to as being "disgraceful," and it is said of it that typhus, scarlet fever, cholera, or diarrhœa may break out at any moment.

We cannot too earnestly impress upon the Guildford and, in fact, all local authorities the necessity (especially during the present heat) of causing the removal of all nuisances in their districts, and of keeping them as free as possible from overcrowding.

APHORISMS FOR BATHERS.

THE committee of the Royal Humane Society have issued the following rules for the guidance of bathers. They were framed by Dr. Christian and Dr. Sieveking. These rules, which are sensible and practical, cannot be too extensively known.

"Avoid bathing within *two* hours after a meal.

"Avoid bathing when exhausted by fatigue or from any other cause.

"Avoid bathing when the body is cooling after perspiration; but—

"Bathe when the body is warm, provided no time is lost in getting into the water.

"Avoid chilling the body by sitting or standing *naked* on the banks or in boats after having been in the water.

"Avoid remaining too long in the water. Leave the water immediately there is the slightest feeling of chilliness.

"Avoid bathing altogether in the open air if, after having been a short time in the water, there is a sense of chilliness with numbness of the hands and feet.

"The vigorous and strong may bathe early in the morning on an empty stomach.

"The young, and those that are weak, had better bathe three hours after a meal. The best time for such is from two to three hours after breakfast.

"Those who are subject to attacks of giddiness and faintness, and those who suffer from palpitation and other sense of discomfort at the heart, should not bathe without first consulting their medical adviser."

METROPOLITAN ASYLUM BOARD.

AT the ordinary meeting of the managers it was resolved that the instructions to the architects of the proposed hospital at Hampstead, should not be altered, as suggested by the Poor-law Board. It was determined that the Fever Hospital at Homerton should be made to accommodate 182 patients, and the Small-pox Hospital 102. The following architects were selected to compete for the designs for the Stockwell Hospitals:—Messrs. Easton, Son, and Brereton, Darbyshire, Marable, and Law, Worthington, and T. H. Wyatt.

THE current number of the *Practitioner*—a monthly periodical under the able joint editorship of Dr. Anstie and Dr. H. Lawson—is a very good one. It includes four original communications that really do contain original material. One of these is an excellent paper by Dr. Thomas R. Fraser on the use of the Calabar Bean in Tetanus and Chorea, which leads us to hope that in this remarkable substance we have a remedy of considerable power over tetanic states. Dr. Fraser reports eleven cases of tetanus (excluding a moribund one), out of which nine recovered. Dr. Grailly Hewitt's contribution on the so-called "irritable uterus" is a forcible argument in favour of the view that the disease so classically described by Gooch really depends on retroflexion of the uterus. Dr. Lionel Beale has a paper on Intermittent Hæmaturia, in which he maintains that the deposit is really not blood, but consists of urates rich in colouring matter. Dr. Beigel's communication on Inhalation in Diseases of the Throat is very good, though it scarcely sustains the hopes which at first sight it raises of this method of treatment. Besides the original matter, the *Practitioner* includes valuable extracts of the clinical and therapeutical parts of other journals, British and foreign.

WITH only two dissentients, the following motion was carried in the Town Council of Edinburgh, on Tuesday:—"That the freedom of the city be conferred on Sir James Y. Simpson, of Strathaven, M.D., D.C.L., Professor of Midwifery in the University of Edinburgh, whose numerous and varied contributions to medical science and to literature, and particularly whose distinguished discoveries and appliances for the alleviation of human suffering, have served to maintain and extend the reputation of the city and its medical school, and entitle him to the respect and gratitude of his fellow-citizens." The dissent was based on the view that such a motion would be regarded as a reflection on the four curators who voted against Sir James's election to the principalship. The freedom of the city was at the same time conferred on Lord Napier of Magdala. We entirely approve of both these honours. The Town Council of Edinburgh rightly thinks that victory gained over suffering by useful medical discoveries is as great a service to humanity as the brilliant victory lately achieved by Lord Napier in Abyssinia.

MR. KINGLAKE, in his new volume of the "History of the Crimean War," touches upon that well-known but nearly forgotten incident which reflects anything but credit upon our humanity, although it proved the occasion for an act of heroic devotion on the part of a medical officer. We allude to the Russian wounded, after the battle of the Alma, being left in charge of Dr. Thompson, of the 44th Regiment, who was ordered to take charge of 700 men, with his servant M'Grath alone to assist him. They were without shelter, and—although Mr. Kinglake, on the authority of a remark in Lord Raglan's handwriting, contradicts it—without food. The fleet was close at hand; and yet these poor wounded Russians lingered on the field for six days, with only Dr. Thompson and his servant to attend upon them and separate the living from the dead,—of whom there were thirty-nine when succour at last arrived.

THE subject of sewage disposal has lately been under consideration in Aberdeen; and special reports have been obtained in reference to places where irrigation is in operation, with the view of determining its applicability as a means of disposal of the city's sewage.

WE are in receipt of intelligence from Chatham regarding the unfortunate accident. The survivors are progressing very favourably. The Royal Engineers had three men injured, one having a bayonet wound of the right side. The weapon entered about two inches from the spinal column, and, after skirting the last rib, made its exit on the front surface of the abdomen—a lucky escape. Another sustained a pretty extensive bayonet wound of the scalp, with a contused one of the face, probably caused by the fall of some of the accoutrements of a comrade. Assistant-Surgeon Rodgers (Royal Marines) was on duty on the spot when the accident occurred, and Dr. Cockburn and Assistant-Surgeon Ferguson, of the Royal Engineers, received the men at the casualty ward.

WE understand that at a meeting of the Faculty of Physicians and Surgeons of Glasgow, held on the 3rd instant, the name of William Macdonald, M.D., Argyle-street, Glasgow, was struck off the roll of Fellows. This procedure necessarily followed on Dr. Macdonald's name being erased from the Medical Register by order of the General Medical Council for "infamous conduct in a professional respect." It may be remembered that the offence of which Macdonald was accused and found guilty was that of offering to procure for fee or reward degrees from foreign Universities, and in falsely pretending to hold a commission from the University of Giessen for inviting young persons, aspirants for the degree of Doctor of Medicine, to Giessen.

A CHEMICAL SOCIETY has recently been established in Newcastle-upon-Tyne, the members already joined numbering twenty-six, exclusive of the committee. The president is Mr. Alderman Bell, and the secretaries Dr. George Lunge and Mr. Marreco.

THE *Lincolnshire Chronicle* states that illness has been on the increase in the city of Lincoln during the last two months. Measles and diarrhœa have been very prevalent, as also whooping-cough and fever. The condition of the river running through the town is described as "most disgusting," emitting a "dreadful stench." It is said to be called by courtesy a river; but that in fact it is "a black, polluted, stinking drain." Is there no one to compel the "local authority" to do its duty?

THE extension of a measure like our Contagious Diseases Act to various stations in India is a matter of vast importance. At Belgaum, in the Bombay Presidency, venereal diseases, we are told, prevail to an alarming extent. In tropical countries, moreover, some of these diseases frequently assume a very severe form; and when they become superadded to constitutional degeneration induced by climate and malaria, the combination, as may readily be conceived, is formidable. The men of the 26th Cameronians and other regiments suffered very much in this way.

WE have intelligence of cholera in the Bengal Presidency up to the beginning of June last, by which it would appear that from March to the 3rd of June the attacks of cholera among the troops amounted to thirty-four, with a mortality of twenty-three.

WE have much pleasure in observing that in appointing four new magistrates for the city and borough of Wells, the Lord Chancellor has been pleased to nominate three medical men, viz., Dr. Livett (some years since mayor of the borough for two years), Dr. Purnell (the present mayor), and Mr. French, surgeon.

REPORT
OF THE
THIRTY-SIXTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

HELD IN OXFORD, AUGUST 4TH, 5TH, 6TH, & 7TH, 1868.

THE members of the British Medical Association mustered in strong force in the good old city of spires—the city 1000 years old—on Tuesday last, the first day of their thirty-sixth annual meeting. A room in the Town Hall was set apart for the reception of visitors; and here every possible information was at once obtained relative to the order of business, the best place for securing lodgings, and the like. The library, writing rooms, and the news rooms of the Oxford University Debating Society were thrown open for the use of members of the Association; and every possible arrangement was made for the delivery and reception of letters, papers, &c. The "annual museum" of the Association, exhibiting a selection of recent pathological specimens, drawings, and preparations that any member might send, was opened in a room of the University museum. A very large number of members found that comfortable quarters had been placed at their disposal in the various colleges with the utmost liberality by the authorities. The ticket delivered to each visitor contained an admirable map of Oxford, with all the places of meeting marked thereon, and the streets leading thereto named; and by this means a great deal of troublesome roaming and inquiry was avoided. Many enjoyed the hospitality of the Oxford professoriate.

Amongst those gentlemen present were the following:—Dr. Lord (Crewe), Mr. Girling (St. Ives), Dr. Falconer (Bath), Mr. Hodgson (Brighton), Sir Wm. Wilde (Dublin), Dr. Marey (Paris), Dr. Tyrrell (Dublin), Dr. Samuel Jones (Chicago), Dr. Goodman (Philadelphia), Mr. Orton (Preston), Dr. Harker (Lancaster), Mr. Flint (Stockport), Dr. Fitzpatrick, Dr. Beatty, Professor Stokes, and Mr. Stokes (of Dublin), Mr. Thompson (Sevenoaks), Mr. Hadley (Birmingham), Dr. Richardson (Tunbridge Wells), Mr. Bartlett (Chipping Campden), Dr. M'Clintock and Sir Leopold M'Clintock (Dublin), Dr. Hall (Brighton), Dr. Morgan, Dr. Gordon, Mr. Southam, Dr. Sampson, and Mr. Mellor (Manchester), Mr. Smith (St. Mary's Cray), Mr. May (Reading), Dr. Heaton and Mr. Wheelhouse (Leeds), Dr. Broadbent (Manchester), Mr. Jobson and Dr. Hardy (Durham), Drs. Cholmeley, Stewart, Sibson, Simms, Miller, Lewis, Murray, Boycott, Heywood Smith, Bryan, Langmore, Hamilton, Tilbury Fox, Wiltshire, Domett Stone, Ramsay, Crucknell, Dickson, Greenhalgh, Gull, and Mackenzie; and Messrs. Paget, Spencer Wells, Dunn, Hulme, Teevan, Cowell, Lord, and Hart (of London); Dr. White (Woodstock), Mr. Burrows (Brighton), Dr. Philipson (Newcastle), Dr. Fox (Bridlington), Mr. Kerswill (St. Germans), Mr. Carden (Worcester), and Mr. Jeston (Henley).

The Committee of the Council met at 1 P.M., at the Old Clarendon, to arrange the routine business of the General Council, which met at 3 P.M., in Convocation House. The main point discussed was the report of the Council to be presented to the general meeting, which took place at 8 P.M. in the evening. It was very fully attended, and was held in the noble Hall of Christ Church. On the platform, amongst others, were Sir C. Locock, Mr. Paget, Dr. Porter, the President of the Irish College of Surgeons, and Mr. Macnamara, the Vice-president, Dr. Paget, Dr. Jeaffreson (Leamington), Dr. Falconer, Dr. Webster (Dulwich), Dr. Sibson, Dr. Gull, Dr. Waters, &c.

Dr. STOKES, the retiring President, said:—"Mr. President of Council, Dr. Acland, and gentlemen,—My term of office as President of this Association having expired, I have the honour to resign this chair to one whose past life and labours are a guarantee that he will do it honour. I need scarcely ask you to believe with what sincerity I have appreciated the position which you have too flatteringly accorded me. To be chosen to preside over an Association of upwards of three thousand

gentlemen, all zealous for the advancement of science, many distinguished in the path of knowledge, and the practical doers of Christ's work on earth, is a distinction of which any man may be justly proud, and for which any man may be thankful. There is no doubt that the place of meeting of this Association influences the selection of President; but it is also true that the character of him to be selected has to do with the place of meeting. For a second time, after a lapse of sixteen years, we meet in Oxford, a spot whose history is that of England, which has had a high and lofty mission, and has been a conqueror in arts, in peace, and in science. Let me say now a few words as to the future of this Association, the most numerous body of men working for the good of science, perhaps, in the world, and which will still enlarge its boundaries. So far it has been a united body, and this is to be attributed to its federal constitution, its independent local action, and imperial executive. How long this may last no one can predicate; nor can anyone say, on the other hand, to what amount of influence for good it may reach. Its durability and usefulness will depend on its being made the instrument for advancing the public good rather than the machinery for advancing the narrow interests of the profession. All must lay to heart the fact that the great issue lies in each individual's hands. The man who by his unselfish labour adds one fact to the common store of material knowledge does more than if he spent his life in medical politics. There are, no doubt, many great wrongs to be remedied, private ills, and corporate shortcomings, hard dealings, and scanty remuneration for services rendered. But how are these to be lessened? Is it by public agitation, by remonstrance to unwilling ears? Rather should it be by placing medicine in the vanguard of science, and so compelling an attention to and an acknowledgment of the claims of its devotees. We must be careful to foster all that relates to the moral and scientific character of the profession. When this is the rule of our action, the reform will begin in those things at which now we fret and chafe. Then will medicine have its due position in the counsels of the country. There is no royal road to this consummation. The fuller cultivation of the physical sciences will give the death-blow to empiricism, and it is our duty to trust far less to the special, and more to the general. A just estimate of medicine will ere long be reached, and this will be hastened, not by coercive measures, by overloading examinations with regard to special knowledge, but by seeing to the moral and religious cultivation and general intellectual advancement of the student, and so improving his status. The greater extension of university training is needed." Dr. Stokes then spoke of the assistance that could be given by the Medical Council, observing that it, however, had no coercive power, and looked to the general body of the profession for moral support and counsel. He then referred first to the compliment paid to medicine in the fact that the Association was allowed to meet at Oxford, the metropolis of ancient grandeur, and then to the success of the Dublin meeting, which was the first occasion on which the British and Irish practitioners met really to know one another, to make common cause in the advancement of knowledge.

Dr. ACLAND then assumed the chair amid great applause, and delivered the

INAUGURAL ADDRESS.

After acknowledging the honour the Association had conferred on him by electing him President, Dr. ACLAND said that he proposed in his inaugural address in the first place to take a general survey of the position occupied by medical knowledge. Medicine, he said, is necessarily linked to the existing condition of science. It is in advance of pure science, inasmuch as it clinically observes as facts some things which science has not yet fully explained; and it believes with strong conviction what can at present be neither demonstrated nor ignored. It is behind the pure sciences, inasmuch as science claims for every fact of science an exactness to which medicine cannot always pretend. But medicine has too long consented to regard itself as an art, and so distinguished from science. It cannot fulfil its function till it recognises and has entirely substantiated its claim to be one of the sciences that precisely interpret the phenomena of nature. The framework of medicine simply considered as an art now depends on accurate data, on experiment, on observation, and direct induction therefrom. But though this be true, yet medicine as an art cannot always go hand in hand with medicine as a science. The physician with emergencies constantly before him cannot wait to act till science has established her conclusions with absolute certainty. Science being organised knowledge, and admitting no uncertain element, objects to the probabilities which guide the master of the art to his conclusions, and lead him to act with a promptitude incomprehensible and appalling to the uninitiated. Just as the scientific navigator who is furnished with the instincts of the empirical seaman trusts those instincts in a gale as readily as his accurate observations in clear weather, so the true clinical physician decides first, and puts together afterwards the reasons for his decisions in logical arrangement. In so far as he does this he abandons the order observed in pure science. Still he must do so in many cases if he is to act at all. If he cannot do so, he is apt to become first sceptical, then indifferent. That such scepticism and such indifference may be a real danger in the practice of medicine, and is some counterpoise to the many advantages which modern medicine may derive from her scientific character, is hardly to be doubted. There is a true medicine and a false medicine. Like the wheat and the tares they now stand together. The true is that which is based on unalterable laws of nature; the false, that which is the result of ignorance, unconscious misinterpretation, or wilful error—ignorance of nature, unintentional misunderstanding of her laws, wilful falsification of facts to subserve some temporary purpose. To winnow the one from the other, to extrude the uncertain from the proved, to add to what is known, regardless of the effect on previous beliefs, is the special duty of the time in which we are now placed. If this duty were completely done, we should possess the real history of an art three thousand years old. The time is come when every opinion and conclusion has to be sifted; and another danger has come rapidly upon us—that of reckless negation of the accumulated experience of our race. We are superiors to our fathers in the means at our disposal, and in the positiveness with which we can up to certain points enunciate our results. But we ought not to overlook the fact that with these positive gains we are subject to contingent losses, and that in an epoch of details and comparatively facile methods of inquiry the great qualities of patience and reserve may be lost to those who are not themselves original investigators. With the exception implied by the above remarks, the temper of modern science indirectly rules the progress of the healing art. It is of consequence to appreciate what that temper is. It would be difficult more aptly to describe it than by the words of Newton: "The main business of natural philosophy is to argue from phenomena without feigning hypotheses, and to deduce causes from effects, till we come to the very first cause, which certainly is not mechanical." This phrase suggested to one a countless host of loving worshippers, to another a crowd of stern inquirers, each in his own sphere tinged with the special hue of his own nature. In physics and biology all alike are searching for a true cause. From the causes of twining in the delicate tendril, to the causes of variation in the human species, from the causes and local conditions of atmospheric changes to the causes and physical consequences of the combustion of a fixed star, the biologists and astronomers of the day are seeking a true cause. And each in his way appreciated by hundreds of fellow workers, and ten thousands of more or less intelligent followers, is making a step towards the first cause, which, Newton says, "is certainly not mechanical." And what have they reached? The generalisation—at once so simple, so overwhelming—that all action of which we are immediately cognisant is but the result of the operation of solar heat upon and through interdependent and correlative existences; that all things in this system are capable only of interchange; that there is no destruction of what exists, no creation of new energy. Having given illustrations of the ways in which medicine adopts the scientific method, he proceeded to consider the present relations of modern medicine to the wants of man in the complex state of modern society, and of the multitude of agents which might be manufactured. If, he said, the philosophic base of medicine had been changed during this century by its relations to science, its object or aim had been as much modified by its relations to man as he is, and as he is becoming under the exigencies of a fast-growing population. In our day preventive and public medicine has become a great branch of medical science. Imperfectly, as yet, carried out in this country, it is more fully developed in several Continental states. Still, it could not be said that the evils incident to modern civilisation have been as yet met by that clear-sighted and systematic superintendence by which alone they can be subdued. The literature of sanitary science had become voluminous. Its general principles were recognised. Its need was felt. Nay, its value was by some injuriously exaggerated. What it required now was proper administrative organisation.

The admirable paper by Dr. Rumsey read last year in Dublin, had been followed by not unimportant results, which would be the subject of a special report by Dr. Stewart. It would suffice to say that they hoped before long to see the relations which ought to exist between this department of the science of medicine and the community at large investigated systematically by a Royal Commission. To anticipate the conclusions of such a commission would be no becoming occupation. But this might confidently be expected, that one result would be the elevation of the duties of an officer in State medicine to that of a recognised profession, as in several special instances it had already become. Hereafter the charge of the public health must be made as much a matter of honourable ambition in the body politic, and must become as much an object of special education and training, as the business of any other recognised branch of the civil service. He had not here touched on the problems arising from the condition of great towns. They had become part of the literature—he had almost said the sensational literature—of the day. The admirable reports of Mr. Simon, under the sanction of the Privy Council; the graphic sketches by Dr. Farr in the Registrar-General's Returns; the papers by the metropolitan officers of health; the returns from Ireland by Dr. Burke, from Scotland by Professor Gairdner and others, and the paper by Dr. Morgan, had filled the public mind first with amazement, then with alarm. Long familiar with poverty and the sorrows and penalties and crimes which hang about it, as well as the brightness and patience which called forth the words "Blessed be ye poor," he had not learnt the intricacy of the problem till in the work of the Cubic Space Committee he found himself set face to face with it, and had to consider what was the significance to the State of a child born in a workhouse, of a prostitute brought up during childhood in the workhouse, cast forth into the city, becoming pregnant, and returning diseased at an immature age to bear a diseased infant. Nor did he see the magnitude of the problem till he found that not in one instance, but in thousands, not in one district, but in many, is this process being carried on. He concluded by considering the relation of the University of Oxford as a place of national education to the subjects under discussion. He knew nothing apparently so damaging to the reputation of the study of classics as a means of forming completeness of character as its active antipathy in former years to the cultivation of science and its passive indifference to the promotion of art. It was addition to the old studies, not substitution, that was needed, and the addition was in course of being made, as was proved by the assembly present in that hall. They might ask why the professions should be welcomed by the University? why this union should be desired by them? The answer was plain. Not through the guidance of the people by a few superior minds, not through the laying down rules of fashion by concurrence, not through the dogmas of authority by compulsion, but by the culture of practical life, by the moral elevation of the working people of every class, were the great traditions of this country to be maintained. If their young men who were to be engaged in professional life, if the sons of their commercial men came there, they would find their characters tempered through life by the processes to which they had been submitted. If they find there the traditions and the practice of general culture, of love of good, of pursuit of all knowledge, pure or applied; if they learnt precision when precision was needed, method when method; if they were taught to indulge imagination where only imagination avails, fancy where only fancy; if they saw men there bowing humbly before that which is not man for man to know, not ashamed of reverence and hope, not afraid of faith; if there they might learn to be industrious and contented, and manly and of tender heart, then the professions might send their students to a place the country had reason warmly to cherish, if not wholly to approve.

Dr. SIBSON moved,—"That the cordial thanks of the meeting be given to Dr. Stokes for his valuable services to the Association, and that he be elected a vice-president."

Mr. PAGET, in seconding the motion, said he did so with feelings of envy and regret; for he was not present at that remarkable compound of scientific treat and joviality which the Association enjoyed in Dublin last year, under the popular presidency of Dr. Stokes, whose upright and unselfish qualities he so much admired. (Applause.) He hoped that the temper Dr. Stokes had shown might survive in the minds of all members of the Association for all years to come.

Dr. STOKES thanked the meeting for the honour they had done him.

The report of the Council was next presented. The Council offered its congratulations to the Association on revisiting Oxford after an interval of sixteen years, and on being presided over at their annual meeting by the distinguished Regius Professor of Medicine in the University. The success of the Dublin meeting they could not pass over without some notice; but felt confident at the same time that the Oxford meeting would occupy a no less gratifying position in the history of the Association. The thanks of the Council were offered to the authorities of the University of Oxford for the ample accommodation placed at the disposal of the Association for the transaction of its general and sectional business. The report next contained a reference to the continued prosperity of the Association, the satisfactory state of the funds, and the work of the various sub-committees and committees: the one appointed "to consider the mode by which the profession at large may be directly represented in the General Medical Council;" that on State Medicine, which also reported "on the steps proper to be taken (if any) for granting a certificate of proficiency in State medicine, and recording the same in the Medical Register." The Council consider it only a bare act of justice to acknowledge the unremitting attention which has been paid to every duty of his office by the president of the Council, Dr. Sibson. The sectional meetings, held for the first time at Dublin last year, were stated to have been eminently successful. Their establishment had, in fact, become necessary, owing to the large number and important character of the papers presented to the Association. The want, however, of a section at which papers on State medicine and medical policy could be read and discussed, was much felt. This want has this year been supplied by the formation of a section on Public Medicine, and the Council anticipate that the meetings of that section will be of much interest. The sectional meetings have so developed that the Committee of Council have appointed a committee to consider and advise as to their future organisation. The progress of the Branches of the Association is satisfactory. Two essays were received for the Hastings Medal; but the Council regret to announce that the adjudicators—Professor Stokes of Dublin, Dr. Paget of Cambridge, and Professor Gairdner of Glasgow—have reported that they do not consider either of them possesses sufficient merit, and they therefore advise the medal to be withheld for this year. The subject for competition for 1869 is "Resection of Joints." The report concludes with an appeal to the members to extend the Association. During the year upwards of 600 new members have joined the Association, making a total of 3627 members on the books up to the present time.

Mr. BURROWS (of Brighton) moved the reception and adoption of the report, and in so doing complimented Dr. Acland on the scope and character of his address.

Dr. JEAFFRESON (of Leamington) seconded the motion, and expressed his gratification at seeing so large a meeting of members.

A long discussion then took place, in regard to the reception given to the recent deputation of the British Medical Association which waited upon the General Medical Council, in reference to the direct representation of the profession in it.

Mr. GAMGEE proceeded to direct particular attention to the paragraph in which an account is rendered of the interview with the General Medical Council, touching the representation on that Council of the registered practitioners of medicine and surgery who are not officially connected with the corporations. It was not proposed to enlarge the Council now, but simply to inquire into the advisability of widening its basis; but though only inquiry was asked for, the constituted Medical Council of the three kingdoms rejected the very temperate supplication, and the President of the Council, Dr. Burrows of London, pointedly observed that "the deputation was stated to be not from the British Medical Association, nor from the Council of the Association, but from the Committee of Council of the Association. That seemed to him to diminish the force of the memorial a good deal." Mr. Gamgee took these words from THE LANCET report, substantially in agreement with the *Medical Times*. They were omitted by the *British Medical Journal*, the organ of the Association. It was mortifying to think that though the *Journal* absorbed all the subscriptions from members, and the greater share of a handsome income derived from advertisements, he had to rely on other papers for full information on a matter so vitally affecting the interests of the profession as did the one in debate. The President appeared with a deputation not from this great body, but from the Committee of Council, a body too narrow in its constitution, too stationary, either worthily to represent or efficiently to govern the Association. The President of Council, Dr. Sibson, addressed the General Medical Council of the three

kingdoms with singular felicity, with unimpeachable accuracy, and great force of logic; yet he failed, and why? Simply because he spoke as the chief officer of a virtually self-elected little body, not as the elected leader on true representative principles of this great Association. The Council of this Association, as a governing body, was a myth; the Committee of Council was all but an irresponsible oligarchy. It had served a good purpose in past times, but it had ceased to be equal to its functions, and it must, therefore, be remodeled. Dr. Stokes, Dr. Acland, and the two ex-presidents, Dr. Paget of Cambridge, and Dr. Burrows of London, all spoke and voted against the prayer for inquiry, with a view to obtain representation. This ugly fact was also passed over in silence by the *British Medical Journal*, though fully commented upon in a leader which put the case for the profession against the corporations, for truth against prejudice, for progress *versus* stagnation, with all the fervour which has distinguished THE LANCET since it became the first and most eloquent champion of our intellectual freedom. The four Presidents who opposed the inquiry are men so able and so honest that the question of personal motives cannot be entertained for a moment. We want no monopoly. We shall ask Parliament for no immunities. We are prepared to give every guarantee for the education and government of our profession for the general good, but we will let the exclusive and intolerant colleges dominate over us no longer, and we will accept no amendment of the Medical Act which does not provide for such a representation of the profession as will enable us to manage our own affairs in a spirit of progress, and on principles of sound sense and wise economy. (Loud applause.)

Dr. SIBSON explained that the deputation referred to was the mouthpiece of the whole Association as assembled at Dublin, and not only that of the Committee of Council.

The motion for the adoption of the report was then put and carried.

Mr. BURROWS then moved—"That the thanks of the meeting be given to the Committee which had charge of the question of the direct representation of the profession in the Medical Council; and that it be reappointed to continue the agitation of the question."

This was seconded by Mr. Bartlett. Mr. Nunneley, Mr. Heckstall Smith, and Dr. Webster of Dulwich, all spoke strongly upon the point, and urged the necessity of taking every possible step to bring about the result they desired.

Dr. HUSBAND advised the Association to avoid further communication with the Medical Council, and to appeal to the Government and the Legislature. The Medical Council had attempted to put them down; and in regard to the assertion that the Council was not supported by the taxation of the profession, he contended that the Council was paid, if indirectly, at all events practically, by the general body of practitioners, who ought to have a voice in its deliberations. The profession was not fairly represented.

Mr. HART explained that the reason no special notice had been taken in the matter in the *Journal* was the fact that he did not feel he had any right to anticipate the line of procedure that would be taken by the present meeting, before which it was arranged that the matter should be brought.

Dr. WATERS spoke in support of these remarks, he having suggested the course taken.

Mr. Burrows's motion, with an appended clause, by which five members from the general body of the Association were added to the Committee, was then carried.

Dr. FALCONER moved that Mr. Williams be re-elected General Secretary. Mr. SOUTHAM seconded this, and it was carried.

Dr. WEBSTER moved, and Dr. WILLIAMS seconded, that Mr. Church and Dr. E. Long Fox be elected auditors. This was also carried.

A vote of thanks to the treasurer and auditors was then passed.

The Report of the Benevolent Fund was next presented. During the year upwards of one hundred cases had been relieved, and over £900 distributed.

On the motion of Dr. ROBERTS, a committee was appointed to discuss the present mode of election to the General Council of the Association, and ordered to report the following Thursday.

Several alterations of rules were made, the most important being as follows:—

1. On the motion of Dr. HENRY—"That the Association shall consist of ordinary members, being duly qualified members of the medical profession, and of honorary members having the qualifications described in Law 18." 2. "Honorary members may be elected by the Association at an annual meeting, on the recommendation of the Council. The following classes of persons shall be eligible: (*a*) Members of the medical profession of scientific eminence, residing in the United Kingdom, or in the colonies, or in foreign countries; (*b*) Gentlemen resident in the United Kingdom, or in the colonies, or in foreign countries, not belonging to the medical profession, but distinguished in Sanitary or in Physical Science; (*c*) Gentlemen who may have rendered distinguished service to the Association. Honorary members shall not be entitled to any further privilege than that of attendance at the annual meetings, and to the receipt by any such member of copies of any memoir or communication of his printed by the Association."

3. On the motion of the Rev. Dr. BELL—"That it is desirable to secure a local treasurer for the district of each Branch Association (the secretary or treasurer of the branch might be the best suited if it could be so arranged), to whom the subscriptions of members might be paid; and that the gross amounts received should be forwarded to the general treasurer, and not to the general secretary, as is now done; and that the list of paid subscriptions might be published in the *Journal*, instead of separate receipts being given." This latter was referred to a committee for consideration and report.

A vote of thanks to the chairman terminated the proceedings.

During the evening, refreshments were provided for the visitors to Christchurch; conspicuous amongst other things were the "loving cups."

WEDNESDAY, AUGUST 5TH.

The proceedings commenced with a public breakfast of the Association, at the Corn Exchange. More than three hundred members were present, between eight and nine o'clock A.M. The new Council met in Convocation House at half-past nine, mainly to settle where the next meeting should be held, and to elect gentlemen as honorary Fellows. At half-past ten the degree of D.C.L. was conferred in the Sheldonian Theatre on Sir C. Locock, Bart., the Rev. Dr. Haughton, Dr. Gull, Mr. Paget, Mr. Simon, and Mr. Syme, in the presence of a large assemblage, amongst which were a goodly sprinkling of ladies.

Mr. WILLIAMS, the secretary, announced that the Duke of Marlborough had very kindly thrown open Blenheim Palace during the next three days, during a certain portion of the day, and that Mr. Harcourt had allowed the same privilege with regard to Nuneham.

The meeting then proceeded to fix the locality of the next gathering of the Association.

Mr. NUNNELEY said: I have been entrusted with an invitation from the town of Leeds, and it will afford me great pleasure to do all I can, and I shall be seconded by all my brother practitioners in the endeavour to make the visit pleasant and useful. It is now twenty-five years ago since the Association visited Leeds. The place will afford much contrast to the two or three places where the Association has lately met, but it can present certain attractions which deserve attention, and there are some of the finest appliances of science to daily practice put into operation for the good of mankind. The new infirmary also will be in itself an object of no little consequence, and there is, in addition, a large mass of human beings, and we have to do with these very closely in our usual work. We will give a Yorkshire welcome, and afford as much hospitality as our poor houses can afford, though it cannot approach that of this metropolis of luxury.

Dr. HUSBAND (of York) seconded the motion, and said that the town which had given birth to the Heys, the Teales, and the Smiths must be an object of interest to the medical profession. There was a vital energy in the men of Leeds that would make the visit a successful one.

The motion was unanimously carried.

Dr. Chadwick was selected as President elect.

Dr. CHADWICK, in returning thanks for the honour done to the town of Leeds and himself individually, expressed his determination to make the proposed visit as far as possible as successful as others.

The following gentlemen were elected Honorary Fellows, in accordance with the new law, on the motion of Dr. Sibson:—Dr. Cookson (Vice-Chancellor), Professor Airey, and Professor Stokes, of Cambridge; Provost and Vice-Provost of Dublin University; Rev. Dr. Carson, of Dublin; Vice-Chancellor of Oxford, Dean of Christ Church, Warden of New College, Principal of St. Mary's Hall, Sir B. Brodie, Professor Phillips, Professor Clifton, Mr. Chapman, M. Duchenne, M. Marey, Professor Victor Carus, Professor Gross, represent-

ing the United States Medical Association, and Mr. Edwin Chadwick.

Dr. STEWART presented the joint report on State Medicine. It explained how the combination of the British Medical and the Social Science Association was brought about by a suggestion of Mr. Hastings, and it reviewed the work done hitherto by the joint-committee body. We have already given publicity to the document containing the details of the inquiries undertaken by this Committee. The main result was the suggestion of a Royal Commission to inquire into the whole matter. Special reference was made to the objectionable clause originally inserted into Mr. Torrens' Artisans' Bill, by which other than a medical officer of health would have had jurisdiction over sanitary matters, and a regret was expressed that now for the first time during the last few years the line of demarcation between qualified and unqualified men is being erased by the Legislature. The effect will be shortly that in all towns of 10,000 inhabitants and above, a person not a medical man will superintend their sanitary work.

Dr. FARR moved that the report of the Committee be received and adopted.

This was carried.

A committee was appointed to continue to ventilate the subject, and press it upon the notice of the public and Parliament.

Professor Rolleston then delivered his address in Physiology (see p. 176.)

Dr. HUMPHRY (of Cambridge) moved a vote of thanks to Professor Rolleston for his brilliant address (which was frequently interrupted during its reading by loud applause, and received an ovation at its close.) Dr. Humphry observed that, in its scope and character, it was such as no man, save, perhaps, the distinguished Oxford Professor, could deliver.

The thanks were given by acclamation; and

Dr. ACLAND observed, in presenting them, that he hoped Dr. Rolleston would long be spared to carry on the good work which he had so successfully inaugurated in reference to physiological science in Oxford.

In the afternoon the third general meeting was held. At two o'clock the Rev. Professor Haughton read a paper on the Relation of Food and Work, full of elaborate experimental detail, bearing directly upon the question of the causation and prevention of disease. We shall hope to give this paper in detail in a subsequent number; suffice it to say that, as in the case of the disquisition of Professor Rolleston in the morning, that of Dr. Haughton was full of solid fact and philosophy, at the same time that it was tinged throughout with wit and humour, fully appreciated by the audience. So delighted was the large meeting that it would not allow the discourse to be curtailed, and its delivery, though occupying nearly half an hour beyond the allotted time, was listened to with intense satisfaction. At half-past three, meetings of the sections in Medicine, Physiology, Surgery, Midwifery, and Public Health were held; Dr. Stokes (in the absence of Sir William Jenner), Professor Rolleston, Mr. Paget, Sir Chas. Locock, Bart., and Mr. Simon occupying the respective chairs in these departments. All introductory remarks were on the present occasion dispensed with, the real business of the meetings commencing at once by the reading of the various papers; but, notwithstanding this, the progress in some sections was by far too slow. The rule had been very fully notified that no paper was in its reading to exceed twenty minutes, and yet some of the members violated this regulation considerably. This is a point that should be enforced on another occasion. It is for the reason that everything else has been so satisfactory that we refer to this little flaw, that it may be prevented in future.

Section A.—Medicine.

Dr. BALTHAZAR W. FOSTER read a paper "On the Use of Ether and Etherised Cod-liver Oil in the Treatment of Phthisis." He began by referring to the great difficulty of digesting fatty food which distinguishes the great majority of phthisical patients. This defective assimilating power had hitherto been treated by incorrect or insufficient means. The only true method of treatment to be adopted in such cases should be directed to the organs whose secretions are at fault. Physiology teaches that the digestion of fat is specially performed by the secretion of the pancreas, and the glands of the small intestine. Dr. Foster had long sought for a means of influencing these glands, and at last had found most ample evidence in the works of Claude Bernard that ether is capable of augmenting the pancreatic secretions to almost any degree. Bernard is accustomed in his experiments to give ether to animals in order to obtain a good flow of pancreatic juice. Applying this discovery to the treatment of phthisis had met with most satisfactory results. The ether was given in a mixture sometimes, but generally in the form of etherised cod-liver oil. Of the patients treated in this way, and all observed over some months, some over two years, 42 per cent. improved while under treatment, 30 per cent. remained stationary, and only 28 per cent. became worse. Twelve per cent. of the cases treated presented all the evidence of the arrest of the disease. In no case were the symptoms of physical signs alone accepted as evidence of improvement; every case was weighed from week to week, when under observation, and only a decided increase of weight in addition to other signs received as evidence.

Section B.—Physiology.

The following papers were read:—

Mr. J. PAGET, "On Stammering with other Organs than those of Speech." The essential characters of stammering, in the want of concord between muscles acting to expel something and muscles relaxing to let that something pass, were shown in certain diseases of the urinary organs, and of those of deglutition. The correspondences of the several sets of cases, especially in their mental relations, and the methods of treatment that they consequently required, were pointed out.

Dr. M'DONNELL (Dublin), "On the relative claims of Bell and Magendie to the merit of having discovered the Functions of the Roots of the Spinal Nerves." Dr. M'Donnell stated that he had been led to inquire carefully into this subject by the observations lately made by MM. Vulpian, Claude Bernard, and others, who, contrary to the opinion so generally received in this country and on the continent, claimed the discovery for Magendie. The author went on to say that he felt assured that however glad British physiologists would be to claim for a compatriot the honour of having made this discovery, they would prefer doing what truth and justice required. After carefully analysing Bell's writings, he has come to the conclusion that, previous to 1822 (when Magendie made his experiments and published the results), Bell's written works contain no evidence that he conceived the idea that the posterior nerve-roots were sensitive, and the anterior purely motor. He (Dr. M'Donnell) assigns to Magendie and experimental physiology the merit of having discovered this fundamental fact in physiology. He had some difficulty in obtaining Bell's celebrated pamphlet of 1811, printed for circulation among the author's friends, and, having obtained it through the kindness of Professor Turner, of Edinburgh, he submitted it to the judgment of several competent persons who were invited to give their opinions independently of each other. All agreed that in this pamphlet, upon which Bell and his supporters rest their claims to his priority, there is absolutely nothing which can in fairness be supposed to indicate a knowledge of the true functions of the nerve-roots.

Section C.—Surgery.

Mr. J. BIRKETT, "On the Mortality arising from Abdominal Hernia, with Suggestions for its Diminution." The author quoted the returns of the Registrar-General to show that the death-rate from hernia in the London districts averaged 149 per annum, and in England 826. The causes of death were stated to arise from prostration, peritonitis, and injury of the bowel, and the fatal results could only be averted by reducing the protrusion as quickly as possible by the taxis, and when that failed by operation. He especially deprecated delay and violence in replacing the hernia, both these circumstances producing many deaths annually.

Mr. G. SOUTHAM, "On the Results of the Operations for Lithotomy performed at the Manchester Royal Infirmary from 1853 to 1868." The paper gave the results of thirty-eight cases of lithotomy operated on by the author at the Manchester Royal Infirmary, all of which were successful except one, the subject of the fatal case being a man in his seventy-ninth year with enlarged prostate; the calculus extracted weighed two ounces, was spiculated, and formed chiefly of oxalate of lime and lithic acid. The ages varied from one year and nine months to seventy-nine years, and the weight of the stones from nine grains to five ounces. The cases were not selected, except that no adult was submitted to the operation where the calculus was supposed to be under the average size, and the urinary organs in a favourable state for lithotrity, of which there were seven. Full details of thirty-two cases were given, eleven of which occurred in adults; in six of these the calculi varied in weight from one and a half to five ounces, and in five from five and a half to seven and a half drachms. Taking into consideration that the most favourable

adult cases were reserved for lithotrity, the author considered a mortality of one in thirty-eight proved that lithotomy is not the dangerous operation it is commonly held to be. He did not, however, wish to disparage lithotrity, which he considered the preferable operation where the bladder, prostate, and urethra were in a healthy condition, and the stone of average dimensions, and he generally adopted it in private practice; but where complications occurred, and they were not of a nature to contraindicate operative interference, he believed lithotomy afforded the best prospect of preserving the lives of our patients. He pointed out some of the circumstances which he considered had contributed to the successful results in his cases. After alluding to the importance of preparatory treatment, several suggestions for facilitating the different stages of the operation were given. He advised free incisions through the skin, areolar and adipose tissue, but those into the membranous and prostatic portion of the urethra should be very limited, the elasticity of the neck of the bladder in children and early manhood admitting of its free dilatation. To obviate the difficulty which sometimes occurs in reaching the urethra, he advised the direction of the knife to be altered according to the age of the patient. The pelvis of the child being smaller and placed more obliquely on the spine than in the adult, the bladder is almost an abdominal organ in early life, sinking into the pelvic cavity as this increases in capacity. Therefore, to find the urethra readily in children, the point of the knife should be directed obliquely upwards in a line with the inner border of the arch of the pubes; whilst in the adult it should be kept more horizontal. Additional facility in this stage of the operation is afforded by allowing the nail of the forefinger to grow longer than usual, which, passing more readily into the groove of the staff, becomes an excellent director for the point of the knife. Especial attention was paid to the prevention of the injurious effects of shock. Immediately the operations were completed, the patients were enveloped in a warm blanket, and on being placed in bed bottles filled with hot water were applied to the feet and other parts of the body, until the signs of reaction set in. In the after-treatment, the patients were allowed nutritious food as soon as the stomach was in a fit state to receive it. The paper was illustrated by drawings, and the calculi extracted were exhibited.

Mr. T. SMITH, "On the Origin and Treatment of Stone in Boys." In this paper the author referred the existence of stone in the bladder (for the most part) to defective excretion from certain organs, whereby the kidneys were forced to excrete more than their due share of refuse material, or to disarrangement of the digestive organs, whereby abnormal substances might be formed and added to the urine, or the natural urinary excreta might be formed in excess. He endeavoured to explain the frequency of stone among the children of the poor, and its rarity among those of the rich, and the equal liability of both classes to the disease in adult life. The ordinary and unusual symptoms of stone were noticed. A case was related where the author had crushed a stone between his finger and a lithotomy staff, thus relieving the child altogether of his disease. Attention was directed to the great difference in the mortality from lithotomy, as drawn from general statistics and as derived from the experience of individual surgeons. As means whereby lithotomy might be facilitated, and its mortality lessened, the author recommended that the bladder should be nearly empty at the time of operation; he described a method of manipulating the staff so as to diminish the size of the wound necessary for the extraction of the stone, and recommended the use of very long and slender forceps. The introduction of a canula surrounded by a conical plug of lint, immediately after the operation, was strongly advocated, and cases were referred to in the author's experience where he believed life had been saved by this means. The paper had appended to it a table of twenty cases of lithotomy in boys.

Section D.—Midwifery.

Mr. J. HARRISON (Congleton) "On Prolonged Hypodermic Injection."

Dr. BRAXTON HICKS "On Transfusion, and a new mode of Management." The author first remarked upon the small extent to which the operation had spread. The various causes he considered to be:—1. The want of success generally, which was accounted for by the impossibility of having the apparatus always at hand; the tendency to postpone the operation till too late; and the difficulty of knowing the exact time at which to operate. 2. The inherent impediments to it, from the position of the patient; and the tendency of the blood used to coagulate. This the author considered the most troublesome and dangerous, as a clot might readily be driven into the system. This Dr. Hicks had now overcome by the employment of a solution of phosphate of soda, mixed with the blood of the supplier whilst flowing. He had first tried it on the lower animals, and then in three cases in human females during delivery. It had simplified the operation to a great extent. The solution is well known to be tolerated by the system.

Dr. GRAILY HEWITT "On the Treatment of Versions and Flexions of the Uterus." The author described the various methods of treatment he had employed, and exhibited a complete series of instruments devised for carrying out the objects in view. The principle insisted on was the preservation of the vagina in its proper position, and making this the fixed point from which to operate on the uterus. In the first place was exhibited a series of light oval rings of various sizes for the treatment of retroflexion of the uterus; also available for prolapsus, the rings of copper-wire wound with gutta-percha. These are modifications of Hodge's pessary. In the next place a stem-pessary of peculiar construction, intended for chronic and more difficult cases of retroflexion. For the treatment of anteflexion and anteversion a series of pessaries of novel construction were shown, termed by Dr. Hewitt "cradle" pessaries, and designed to support the fundus uteri by means of two crutch-shaped projecting portions. The pessary is a ring bent into the necessary shape, and of various sizes. This pessary the author has used with uniform success for a period of two years, and stated that by its means the uterus could be held in almost any required position when inclined forwards abnormally. He had found it a most valuable invention, and it had been the means of relieving patients of most distressing and troublesome symptoms. Next was exhibited a series of stem ebonite pessaries, to be worn in the cervical canal. These are retained there by a ring, and the two parts are connected by a simple arrangement. These were used in cases of anteflexion, when the flexion was troublesome and chronic.

Section E.—Public Medicine.

Mr. STEER brought forward the subject of the propriety of the appointment of a committee to draw up a recommendatory tariff of medical fees, and the subject, after some discussion, was referred to a committee, with instructions to report to a future meeting.

Mr. IKIN read a paper "On the Comparative Results of the Inspection of Recruits in the Public Service by Military and Civil Surgeons, and on the Regulations for the guidance of Medical Men." He brought this subject before the Section with a view to rouse civil surgeons to be more careful in the duty of the medical inspection of recruits, in order to obviate inconvenience and expense to the public service, as well as to remove the blame that the military authorities were disposed to cast upon them for deficient judgment and carelessness. His own experience had been extensive and varied, for since 1853 he had inspected nearly 13,000 recruits for the line and militia. The prevalent causes of their rejection were pointed out by means of statistical tables, as well as the state of education from his own register, and from the reports of Dr. Balfour, of the Army Medical Department. The exact numbers finally approved during the last five years were tabulated, and it was shown that more than double the number of recruits inspected by civil surgeons were rejected at head-quarters of recruiting districts, compared to those inspected by military surgeons. This afforded just ground for a reflection upon their competency for the duty. He thought that the medical inspection of the volunteers was a fair question for consideration, and certainly it would have to be resorted to before they could be relied upon as fit for lengthened service. He called attention to the recent War Office Regulations for the formation of the Army and Militia Reserve, and said that their only fault was that they were too strict to allow more than a very small proportion of men, even from the best selected regiment, to pass the ordeal. The effect would be that the formation of the Reserve would be almost impracticable. He thought military hygiene ought to be more generally taught at the medical schools, and not confined to Dublin and Netley.

Dr. OPPERT read a paper "On Medical Education in England and Abroad compared." He considered a good system of medical education important for the welfare of the nation. He gave a description of the systems existing in Germany, Austria, France, Italy, Switzerland, Russia, Sweden, America, and the colonies. Speaking of Germany, he mentioned the mode of learning auscultation and percussion, the stringency of the State examination for the licence, and the laxity followed at

others; also the practical utility of the policlinics. The longer course of study in Austria, and the institution of the Josephs Academy in Vienna, were described. The reforms in Italy, Russia, and Sweden were enumerated. The existing systems were, in conclusion, classified as free and tutorial ones. The latter prevailed in Great Britain, and were also adopted for the military educational institutions on the Continent, where collegiate residence also existed. In no country the students had more liberty than in Sweden, as they were not even required to produce evidence of having studied medicine or attended lectures when they became candidates for the examination for the licence. Apprenticeship did not exist on the Continent. The fees were lowest in Russia and Italy, and the study free in Sweden. London might utilise the immense means existing for practical instruction in a more satisfactory manner.

At half-past eight in the evening the President gave a *soirée* in the New University Museum, which was very largely attended. Amongst the objects of interest exhibited were an elaborate series of microscopical preparations illustrating anatomical and pathological points of interest, under powers ranging up to $\frac{1}{75}$. exhibited by Dr. Lionel Beale. During the evening Professor Clifton showed various modern instruments for physical research, including Helmholtz's apparatus for investigating the nature of sound. M. Marey demonstrated in the large lecture-room certain physiological phenomena with the sphygmograph and cardiograph. And the Annual Museum, in a separate part of the building, under the charge of Mr. Hutchinson and Drs. Gray and Tuckwell, contained drawings, casts, and portraits of diseased conditions, new instruments, drugs, and the like. The *soirée* was an admirable wind up to another thoroughly satisfactory day at Oxford.

THURSDAY, AUGUST 6TH.

At nine o'clock the annual meeting of the New Sydenham Society was held in Convocation House; Mr. Paget in the chair. It was announced that four works will be published in 1869—the second volume of Trousseau, the second of Lancereaux, a Biennial Retrospect for 1867–8, and a sixth fasciculus of the Atlas of Skin Diseases.

Many of the members of the Association visited the Radcliffe Infirmary, it having been arranged that the nitrous oxide gas should be there administered by Dr. John Murray and Mr. Clover as an anæsthetic.

At 10 A.M. the fourth general meeting was held in the Divinity School.

Dr. HUGHES BENNETT commenced the business by reading the report of the committee appointed to inquire into the Action of Mercury in the Secretion of Bile. Thirty-three experiments in all, on dogs, were made, under the superintendence chiefly of Dr. Rutherford, Dr. Gamgee, and Dr. Fraser of Edinburgh. The main conclusion arrived at was this: that in moderate doses mercury, acting upon the constitution, has no influence in increasing the secretion of bile; and that in large doses the drug greatly diminishes it in dogs. Dr. Bennett then proceeded to note the manner in which mercury acts on dogs. Dr. Rutherford has worked out the fact that dogs seem to be affected by mercury exactly in a similar mode to man: they are salivated readily by it. And it is therefore believed that the results arrived at in dogs are most perfectly applicable analogically to the illustration of the mode of action of mercury in man.

The thanks of the meeting were given to Dr. Bennett and his coadjutors for the report and their laborious investigations. The propriety of granting funds for further research or in liquidation of any expenses already incurred was referred to the Council for its consideration. The discussion of the report was deferred till the general meeting on the following day.

Dr. GIBBON presented the report of the Parliamentary Bills Committee, which was received and read, the Committee being reappointed.

A letter from Dr. Rogers, the president of the Poor-law Medical Officers' Association, asking for the support of the British Medical Association, was read.

Mr. HART moved, "That a committee be appointed to confer with the Council of the Poor-law Medical Officers' Association, and to co-operate with the latter in furthering Poor-law medical reform; the committee to consist of Dr. Sibson, Dr. Falconer, Mr. Newnham, Dr. Stewart, Mr. Lord, Mr. Fleischmann, Mr. Heckstall Smith, Mr. Neate, M.P., Dr. Heslop, Mr. Chadwick, C.B., and Mr. Hart."

This motion was carried unanimously.

At 11 A.M., a meeting of the Graduates of the Universities of Glasgow and Aberdeen was held in Convocation Hall, to consider the question of the representation of these Universities in Parliament. Dr. Stewart occupied the chair. A general feeling was expressed that no active steps could be taken in regard to the present election, and that efforts of graduates should be directed to secure the return of a medical representative on a future occasion.

Dr. BATEMAN moved, "That the meeting should form themselves into a committee for the purpose of watching the question, and of taking such steps as may be deemed advisable."

This was seconded by Dr. Martin, and carried.

Subsequently a London sub-committee was formed.

At eleven o'clock, also, the meetings of the various sections were held. Mr. Simon, in that of Public Medicine, took occasion to deliver an address on the subject of Preventive Medicine, making special allusion to the wide field of usefulness opened up to the Association by the formation of the new section over which he had been called upon to preside. He dwelt upon the results already obtained, and the fact that we had arrived at a point when the absolute prevention of such diseases as typhoid fever and cholera was daily becoming more and more a certainty.

During the day, the members of the Association began systematically to visit, in parties, various places in the neighbourhood, such as Blenheim Palace, the halls of the College, &c. The University museum was opened, and Dr. Lionel Beale demonstrated some of the results of his researches in histology, which created a good deal of interest. The day's proceedings were brought to a close by a public dinner of the Association in the hall of Christchurch.

[Several papers, of which we have abstracts in type, were read. They will be published next week.]

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A MEETING of the members of this Association was held at the Freemasons' Tavern on the 31st ult. Amongst those present were Dr. Pinder (Camberwell), Mr. Frost (Kensington), Mr. Vinall (South Hackney), Dr. Welch (Bethnal-green), Dr. Griffith, Dr. Stallard, Dr. Nicholas (Wandsworth), Mr. Chapple, Mr. Mackinlay (Isleworth), Dr. Fowler (East London), Dr. Dudfield, Dr. Prosser James, Dr. Williams, Mr. Fletcher, Dr. E. Jones (Lewisham), Mr. Benson Baker, Dr. Thomas, Dr. W. H. Cook (Hampstead), Mr. Firth (Rotherhithe), Mr. Norton (Holborn), Dr. Roberts, Mr. Elliott (City of London), and Dr. Richardson (Whitechapel).

The annual report of the Council stated that the Association has made great progress during the past year. The number of members has been nearly doubled, many provincial medical officers having joined as associates. The cash balance in hand, after payment of all claims, amounts to about £25.

It having been frequently suggested that the Association should extend the field of its operations and admit to the right of membership all medical officers residing in England and Wales, the Council have had under consideration for some months past the propriety of submitting, at the annual meeting, a proposition to this effect; and now recommend the Association to accept the proposition to alter the title to "The Poor-law Medical Officers' Association." They have very carefully gone through the existing rules; and, having been favoured with suggestions by numerous provincial medical officers, they have drawn up a new code, suitable to the altered circumstances of the Association. The Council suggested a reduction in the amount of the annual subscription. The Council also propose to enlarge the "objects" to be attained, while restricting them more than heretofore to matters directly affecting the welfare and the interests of the medical officers. And there is good reason for this, because the best guarantee for the proper treatment of the sick poor lies in a contented state of the medical service, which can only be secured by a fair consideration and removal of admitted grievances. Referring to the recent decision of the House of Lords in regard to the necessity of having more inspectors, the Council express a belief that the appointment of more inspectors merely would be but a single step in the right direction, as improved inspection would be of little avail if there were no board to receive the reports of the inspectors, to consider their suggestions, and, if necessary, enforce their recommendations. The Council cannot but believe that it would be for the public interest that all the inspectors should meet regularly for the discussion and settlement of the various questions which arise, and go through the country on circuit at stated periods to in-

spect, not merely the workhouses, but the working of every department of the local administration of the Poor Laws in connexion with the sick poor; and a lay and a medical inspector might very usefully make their circuit together, after the plan followed by the Commissioners in Lunacy.

Dr. ROGERS then addressed the meeting, and passed in review the causes which led to the combination of medical officers and some of the labours with which they have been occupied. The first scientific effort was to secure a practical settlement of the question of cubic and floor space necessary for sick wards. "You will remember," said Dr. Rogers, "that Dr. Edward Smith, one of the medical advisers to the Poor-law Board, had promulgated notions and opinions which were not only at variance with the accepted dicta of scientific authorities, but which were also opposed to our own individual experience in the wards of our respective workhouses. I believe the freedom with which we entered on this question, and the logical conclusion at which we arrived, led to the issue of the Cubic Space Commission, whose more extended labours practically settled the subject. I say *our* efforts; for it is impossible to suppose that the central authority would have disregarded the conclusions at which we unitedly arrived. There is no question that our report on the subject drew public attention to the Association, seeing how favourably at that time we were noticed by the press. The next subject we took up was that of altering the vicious arrangements which prevailed in the metropolis respecting the removal of pauper lunatics. As many of you are aware, it was customary to take these unfortunates to a police court, and there, in the lunatic's presence, on oath, give reasons for supposing him to be insane —a most unseemly, indecent, and really cruel practice. One would have supposed that to call the Poor-law Board's attention to the subject would have been sufficient to secure its abolition. But no: with that indifference to matters relating to paupers' feelings and comforts characteristic of the permanent staff, our remonstrance was unheeded until we invoked the aid of the Lunacy Commissioners, when at last, after months of delay, a circular letter was sent from the office prohibiting the practice. After this was settled, we directed our attention to the advisability of establishing uniformity of dietary in the metropolitan workhouses. You are aware what trouble we took to frame a dietary table that should meet the legitimate requirements of the various classes of workhouse inmates. Upon one point we were unanimous—the abolition of the practice of giving aged and infirm men and women pea-soup and suet pudding; but we reckoned wrongly in supposing that our notions, derived from scientific and personal experience, would prevail. The subject was referred to the *medical adviser*—Dr. Markham; and he, ignoring our opinion, drew up a form of his own, in which the objectionable pea-soup and suet pudding is retained. It has been stated by a journal evidently devoted to this official's interest, that careful experiments have been made to test this dietary. It would be curious to know how they were conducted. We know that the Poor-law Board, or permanent staff, or secretary, which is the same thing—I do not allude to the Parliamentary Secretary—has laid down the principle that to take the unsupported statement of a pauper is reprehensible. I presume those aged females and others on whom a dietary of suet pudding and pea-soup was tried, were asked how it agreed with them. Fortunately, I have had lately the opportunity of hearing the opinion of a late medical officer, who no longer has occasion to dread the ire of the Secretary of the Board, and he tells me that when the new diet was tried at the workhouse which he had charge of, the aged and infirm inmates complained loudly of its effects. I believe there can be no doubt that the prominence given by this Association to the expediency of all medicines being found by the guardians led to Mr. Hardy's making it an essential part of his scheme. It is true it has not been carried out, the working of the Act not having now the control of a master mind; it will, therefore, be necessary to urge the point again. You will have learnt from the public journals, and also from the report of the Council, that we have resolved to extend the sphere of operations of this Association by dropping the prefix 'Metropolitan,' and opening it to every past and present medical officer, whether resident in town or country, and you will be pleased to hear that this determination has been largely responded to, numbers having joined. Three hundred medical officers have joined us. I had fifty-six adhesions this morning, and I expect they will come in day by day. I want to get a large number of members. We will not go to the Poor-law Board, but to the Prime Minister, and show him that we are a body of educated but oppressed gentlemen. Depend upon it our antagonists—for I am obliged to say we have antagonists—watch with interest our movements; already it surprises them that we should have succeeded so far; let us astonish them still more. Hitherto, until the advent of the present President in power, you did occasionally hear a kindly remark made in Parliament; and you were flattered with the belief that something was to be done to ease your burdens. But I believe I am correct in stating that no generous observation has escaped the lips of the noble lord now presiding at the Poor-law Board. Certain it is that during his rule you have been required by general order to provide yourselves with qualified assistants, and that from your present ridiculously small remuneration; and, further, you workhouse surgeons have had inspector's work imposed upon you without additional pay—evidently to punish you for the exposure of inspectorial incompetence which THE LANCET revelations have made. There is, however, balm in Gilead: the cruelties and exactions of a Pharaoh, in ancient history, made the Jewish people an independent nation. In our day, the harsh and high-handed proceedings of Earl Devon, or his secretary, Mr. Fleming, will make the Poor-law medical officers what they never were before—a united body, resolved to continue this agitation until a complete overthrow of the existing wretched system of medical relief to the sick poor is effected, and until they are better paid. At a former meeting I told you what was, doubtless, a novelty to many, that there was, virtually, no Poor-law Board at all, unless a President and a permanent secretary could be accounted as such. I told you the nominal Board never met, and that there were no deliberations, for the simple reason that there was no one to deliberate. The press gave a certain publicity to this statement, and it was doubtless read by many. But what I want you to do is this—to tell your neighbours, your friends, the more intelligent of the guardians of your respective boards, what I have said. And why? Because I want to see this nominal Board reconstituted; because I feel sure that no change for the better can possibly take place until there is a fresh cast, not of characters only, but of persons. Now what I do wish to see, and what I do ask you to help to call into being, is a *bonâ-fide* Board—not a sham,—composed of a president, who should be a Cabinet minister; a vice-president, who should be permanent; and, besides, two laymen, distinguished for intelligence, and two practical high-class medical men, not mere journalists. Let these, or something like these, constitute a Board. There would then be the probability of your interests being more fairly considered than they ever have been; and the scandal and disgrace of the richest country in the world being eaten into by the blight of pauperism to the extent it now is would in large measure be put an end to. We have, as you are aware, in this country a body called the Lunacy Commissioners, whose constitution has given me a hint for the sketch I have just made. They are not everlastingly discredited by the public. No, they do their work, and they do it well too, though noiselessly. You will have seen that an amended Poor Bill has just been passed. I have not thought it worth while to urge on my parliamentary friends the alteration or rejection of a single clause. I feel certain that a reformed House will take up the subject early in the new Parliament. This mockery of central administration cannot last. Already you may see the handwriting on the wall—Tekel, you are weighed in the balances and found wanting. But, gentlemen, the character of what shall come hereafter depends greatly on the way in which you use your influence. I can but suggest the mode. It is to agitate the subject wherever you can find listeners, and notably to influence all candidates for a seat in Parliament to take a just and generous view of the question; and do this speedily, for you may already see both parties in the field actively canvassing, and ere we meet again the electoral campaign will, practically, be nearly over. And now I must bring these observations to a close. But, before sitting down, let me return to members of the Council and of the Association generally my sincere thanks for their kindness and for the confidence which has been reposed in me. I have, to a great extent, been the mouthpiece of the Association; but it would be unjust were I not to state publicly that I owe to several of the gentlemen around me many valuable hints and suggestions which have gone forth to the world as my own. This is not the time to name these gentlemen; if I did, the distinction would, not improbably, be found to be accompanied with danger, especially under the existing *régime*. I now move the adoption of the report."

The motion was seconded and carried unanimously.

Dr. FOWLER said, as one of the oldest members of the Association it was his duty to move a resolution to the effect that the

Association should cease to be metropolitan, and that it should include all Poor-law medical officers, the Council consisting of an equal number of metropolitan and provincial members, chosen equally, if possible, from workhouse and district medical officers; this latter being the condition made by Mr. Griffin in handing over a handsome cheque, the remnant of funds of the Poor-law Medical Reform Society. Dr. Fowler said, as "good wine needs no bush" so this resolution required only few words to recommend it. But if strength is to be found in numbers, greater results must be expected than have been obtained hitherto. He spoke in terms of warm respect of the work done by Mr. Griffin, and hoped that they would continue to tread in the same path with the same honest motives.

The resolution having been formally seconded, was agreed to unanimously.

The meeting then proceeded to pass the new laws and to elect the new officers, of which the following is a list:—President: Dr. Rogers.—Vice-presidents: London—Mr. Godrich, Dr. R. Fowler, Mr. Eugene Goddard, Dr. King. Provinces—Mr. Griffin (Weymouth), Dr. Colbourne (Chippenham, Wilts), Dr. Kendall (King's Lynn), Dr. Woodward (Worcester).—Council: London—Dr. C. Andrews, Mr. Benson Baker, Mr. R. Bruce, Dr. Burchell, Dr. W. H. Coot, Dr. Dixon, Dr. G. Jones, Dr. J. G. Mackinlay, Dr. Nicholas, Mr. Norton, Mr. Vinall, Dr. Welch. Provinces—Mr. Bury (Whetstone, Middlesex), Dr. Luce (Wincanton, Somerset), Dr. R. W. H. Griffin (Southampton), Mr. R. Grimbly (Banbury, Oxon), Dr. Mackinder (Gainsborough, Lincoln), Mr. Prowse (Amersham, Bucks), Dr. Reid (Newbiggin-by-Sea, Northumberland), Mr. Ryott (Newbury, Berks), Mr. H. Terry, jun. (Northampton), Mr. Wheeler (Bexley, Kent), Dr. Wilding (Church Stretton, Salop), Dr. Woollaston (Shrivenham, Berks).—Hon. Treasurer: Mr. C. M. Frost, 47, Ladbrook-square, W.—Hon. Secretaries: Dr. Dudfield, Upper Phillimore-place, Kensington, and Dr. Thomas, High-street, Manchester-square.—Auditors: Dr. Pinder and Dr. Welch.

A vote of thanks to the Chairman terminated the proceedings.

Correspondence.

"Audi alteram partem."

THE HOSPITAL FOR DISEASES OF THE THROAT.

To the Editor of THE LANCET.

SIR,—It is with some surprise that I notice the following sentence in your leading article on "specialism":—

"We have lately seen in the columns of the newspapers a certain 'Hospital for Diseases of the Throat' advertised and lauded in a strain which really calls a blush upon the cheek of those who have the honour and welfare of their profession at heart."

As a member of the Committee of Management, and therefore partly responsible for the issue of the advertisements to which you allude, I should feel greatly obliged by their specification in your columns. Such specification would ensure their prevention for the future.

Other remarks in the article render it necessary for me to add that I have consented to act on the committee of the hospital because I believe that the hospital is advantageous both to the profession and the public, and that throat diseases are better cared for within its walls than they have been hitherto in the general hospitals. In justice, also, to Dr. Mackenzie, I freely admit his superiority in the treatment of throat diseases, and am convinced that there is not a single member of the staff of the London Hospital who would not unhesitatingly make a similar admission.

Requesting the earliest insertion of this letter,

I am, Sir, your obedient servant,

WALTER RIVINGTON,

July 28th, 1868. Assistant-Surgeon to the London Hospital.

*** A paragraph appeared in the daily journals headed "Hospital for Diseases of the Throat"—an institution originated "to facilitate the employment of the newly invented laryngoscope amongst the sick poor." We were by it directed to the Registrar-General's Returns for 1866 as to the great mortality of diseases, such as croup, diphtheria, &c., and told that the large number of fatal cases of throat-disease served to indicate the prevalence of this class of ailments, and the necessity for a special hospital for their treatment. There followed a notice of the annual dinner with a noble duke in the chair, and all the rest of it. We repeat the verdict of which Mr. Rivington is probably the only person who does not see the justice, and if he really desires to prevent our animadversions in the future, he will not only omit a part, but the whole advertisement. We are quite prepared with our reasons. Hospitals are for the good of the public, the patients, and the profession. In so far as they are diverted from these ends, and become the bantling of a specialist, armed, it may be, with a new instrument, they tend to become crying evils rather than a public good. For the public and for patients there are numerous accredited institutions, with the best available professional talent at their command; and these institutions, while they exist for the welfare of the sick, subserve the interests of the public and the profession, by affording the latter clinical material for the instruction of those who are being trained to treat the public, and what is more, have paid to obtain the requisite information. Special hospitals divert so much money from these charities, and open the door to grave abuses, such as the physicians and surgeons of a past generation would never have tolerated for a moment. We complain that paragraphs such as that on the Throat Hospital are calculated to mislead in more senses than one. Take all these fatal cases, and could it be pretended that they would have been saved by admission into a throat hospital? What is the inference to be drawn from this magnification of throat diseases, but a false one pathologically, and one untruthful and unjust to the medical staff of the hospitals? Diphtheria can no more be said to be a throat disease than variola can be called a skin disease. Individuals suffering from laryngeal affections, as the product of blood-poison, or the concomitant of pulmonary phthisis, syphilis, or hysteria, for example, are, we contend, proper subjects for treatment in a London hospital, and every advertisement or paragraph about throat hospitals only imposes upon their ignorance and credulity when it deceives them into ignoring a grave constitutional disease by the exaltation, it may be, of some insignificant outlying ailment. If every invention and every ailment is to have its own hospital and staff, with its advertisements and annual dinners, we may well ask ourselves whether it would not be better to treat diseases by the system of a trading company at once, and form one for the *treatment of diseases of the throat*, limited. As to Dr. Mackenzie's superiority over his colleagues in the treatment of these diseases that is quite beside the question, and we decline to enter upon it. By all means let him display his skill in a legitimate channel, and one—that of the London Hospital—is open to him. That he is a man of professional reputation increases our regret that he should fail to perceive in what the true dignity of that profession consists, which is certainly not in the multiplication of special hospitals, nor in advertisements or placards at the corners of streets directing patients the way to one for diseases of the throat.—ED. L.

MEDICAL CANDIDATES FOR SEATS IN PARLIAMENT.

To the Editor of THE LANCET.

SIR,—Will you allow me to say how entirely I concur with Dr. Wynn Williams as to the absurdity of medical candidates for the representation of universities presuming to think of being sent to Parliament on the mere strength of their being medical men, without any expression of their opinions on those great political questions on which it will be their first duty to vote decidedly. There is much difference of opinion abroad as to the wisdom of giving universities, as such, a special representation; and I confess that if men could be returned to Parliament on the mere strength of a special or technical reputation, without reference to political principles, a very strong case indeed would be made out against the principle. But I

hope for better things of University constituencies, especially Scotch ones. I hope to see them declare unmistakably in favour of those political principles which are most akin to ethical principles. University constituencies may fairly be expected to endorse those great public movements which seem to rest on principles of justice and equity; and if a candidate has not a word to say on these movements, he may be a great physician or a great physiologist, but he has no business in the House of Commons, and University constituencies will consult their reputation by refusing to send him there.

I am, Sir, obediently yours,

August 3rd, 1868. M.D. Edin.

Obituary.

JOHN ELLIOTSON, M.D. CANTAB., F.R.S.

JOHN ELLIOTSON was born in the year 1786, in High-street, Southwark, where his father carried on an extensive business as a chemist and druggist. He was educated mainly as a private pupil of the rector of St. Saviour's. He then entered as a fellow commoner of Jesus College, Cambridge. Subsequently he studied at Edinburgh, where he did not particularly distinguish himself, and took the degree of M.D. in 1821. He also studied at Guy's and St. Thomas's Hospitals, and was elected physician to the latter hospital on the demise of Dr. Currie, in 1822. He had previously been elected a fellow of the Royal College of Physicians of London. Dr. Elliotson very early evinced those habits of industry and scientific research which were characteristic of him during the greater portion of his long life. He had early imbibed the opinion—an opinion which he entertained to the last—that if the practice of medicine was to be improved it must be in respect of therapeutics. Immediately after his appointment at St. Thomas's Hospital he commenced his "experiments" with regard to the action of medicines, and was the first who proved by direct experiment the value of quinine as an antiperiodic remedy, of prussic acid in vomiting &c., and iodide of potassium in various diseases; and the therapeutic properties of creasote and carbonate of iron. This love of inquiry was carried on for many years, both at St. Thomas's and the North London Hospitals. True to his creed, he invariably tried every new remedy, always at first with great caution, but would occasionally carry his doses to such an extent that his pupils were astonished and alarmed. Thus, in a case reported in THE LANCET, he gave a man suffering from delirium tremens a grain of the hydrochlorate of morphia every hour for twenty-four hours; and another, labouring under diabetes, twenty minims of creasote every six hours for several days. He always contended that medicines, if small doses were at first given, might be administered almost to any extent, provided of course their effects were judiciously and carefully watched. In the same way he was one of the first, if not the first, in this country to advocate the use of the stethoscope, in the practice of which he was an adept. He was in the habit of relating a circumstance which occurred early in his career, when he was striving to introduce the stethoscope into general use. He was at a meeting of the fellows of the College, Halford being then president. One of the antiquated physicians of the time asked Halford what he thought of the "new instrument." "Oh," said the president, "it is a thing which will do for Elliotson to rave about." Neither of the gentlemen alluded to was aware of the fact that Elliotson was within hearing.

Very early in his career as a hospital physician he was struck with the lamentable deficiency of clinical teaching in the metropolitan hospitals, not a clinical lecture being given in any one of them at that time, if we except those by Dr. Billing at the London Hospital. Elliotson became the most energetic teacher of the day in the wards of the hospital, and for many years, both at St. Thomas's and the North London, lectured on every case that came under his care. He was the first then to give an impetus to this important branch of teaching in London. Notwithstanding his great industry, his acknowledged abilities, and prepossessing manners, Elliotson did not for some time make a more prominent figure than young physicians usually do in the first years of practice. But the turning point in his fortune was at hand. He sent to this journal in 1829 and subsequent years, a series of cases, with short clinical remarks appended to each.* The concise, clear, and eminently practical manner in which the cases were related, and the remarks made, immediately arrested the attention of the profession, and Elliotson, according to his own statement made in an introductory lecture at University College, found "his practice leap in one year from £500 to £5000." There is no reason to doubt the strict accuracy of this statement, for at the time the manner in which the cases were reported was unique, and clinical lecturers were then not to be found. And here, *en passant*, we may refer the voluminous and heavy lecturers of the present day to these admirable productions; they are models for writers, and most pleasant to readers. In the same year (1829) he delivered the Lumleian lectures at the Royal College of Physicians, the subject he chose being "Diseases of the Heart." These able productions did much to enhance the growing reputation of the young physician. Shortly afterwards he was appointed Professor of the Principles and Practice of Physic at the London University, now University College, which at that time had an unrivalled staff of medical lecturers,—Samuel Cooper, Lecturer on Surgery, Jones Quain on Anatomy, Turner on Chemistry, Todd Thomson on Materia Medica, Lindley on Botany, Robert Grant (the "English Cuvier") on Comparative Anatomy, and Robert Liston, afterwards, on Clinical Surgery. Elliotson was a fit associate of such men, and indeed for several years was one of the most popular teachers in the schools, and had one of the largest classes. On the establishment of the North London Hospital, as it was then called, in 1834, Elliotson resigned his appointment at St. Thomas's, and was elected physician to the former, having for his colleagues Dr. A. T. Thomson and Dr. Carswell. Here he carried into practice the principles which he taught in the opposite building.

For years the name of Elliotson was second to none amongst the practitioners of medicine—whether as a lecturer, a clinical teacher, or a consulting physician. But at the very zenith of his fame and fortune he was doomed to meet with a reverse, from which he never recovered, and which was the "blot upon his escutcheon," which all who knew him lamented to see. In 1837, a Frenchman, styling himself the Baron Dupotet, came to London as an advocate and practitioner of mesmerism, and applied to Dr. Elliotson for permission to try its effects upon some of the women patients in the hospital. This was readily granted, and hysterical and excitable girls were in several instances magnetised to sleep by certain manipulations in a vertical direction, and awoke by others in a horizontal direction. The ardent and suggestive mind of Elliotson was evidently much excited by these displays, and he thought the action of mesmerism might be brought into use as a remedy for certain diseases of the nervous system, such as epilepsy, hysteria, &c. As he could do nothing by halves, he set to work in good earnest to try the effects of the "new remedy," the fame of which had spread far and wide. In consequence, the women wards of the hospital were occupied mainly with epileptic and hysterical patients, and the clinical clerks and other pupils were occupied in "manipulating"—or, as some called it, "pawing"—the patients to obtain mesmeric effects. At first, the clerks, with, we believe, one exception, concurred in this practice, but eventually it gave rise to much dissatisfaction, and would no doubt have ripened into mutiny had their teacher been a less able or a less fascinating man. If the practice of mesmerism had stopped here, all might have come right again, but unfortunately during the progress of the "inquiry" two sisters named Elizabeth and Jane Okey presented themselves amongst the out-patients as suffering from epilepsy, and desirous of trying the new remedy. It would be tedious here to enter into a full detail of all the effects which appeared to be produced on these really remarkably clever girls. Suffice it to say that Elizabeth Okey, who was a consummate actor, and had been one of the "unknown tongues" of the Rev. Edward Irving, was not satisfied with being sent into mesmeric sleep; she became consecutively fixed as in a trance, and then prescribed for her own ailments and the ailments of others. She became a "sleep-waker," in which she was said to have two distinct phases of consciousness and sensation, each being commenced or terminated at the will of the operator: in one state she clipped her words in a peculiar manner, and talked "midsummer madness;" in the other she was rational, and talked plainly and intelligibly. All this train of phenomena culminated in "clairvoyance," and Okey began to foretell the issue of disease

* These cases were reported by Dr. Symes, then a pupil of his at St. Thomas's, and in whose house, forty years later, Dr. Elliotson breathed his last.

and the advent of death. This so alarmed the patients, particularly as in one instance she had "foretold" the decease of a man whose death was not anticipated, that the Committee of the hospital were called upon to interfere, and Dr. Elliotson was requested to discontinue the practice of mesmerism in the institution.*

During the progress of these experiments frequent *séances* were held in the theatre of the building, which were attended by crowded audiences, who went away either astonished and convinced or puzzled and unbelieving. Here at one time might be seen the highest and most distinguished persons in the land,—statesmen, bishops, great generals, philosophers, poets, and novelists. On one occasion when the veteran Marquis of Anglesea presided, there were present Stanley, the late Bishop of Norwich, and the greatest poet and the greatest novelist of the age, Thomas Moore and Charles Dickens, then just entering on his brilliant career as the author of "The Pickwick Papers."

The public mind was so agitated by the reports spread abroad of the assumed "wonderful effects" of mesmerism, that the late Mr. Wakley determined on bringing its "virtues" to the test. Accordingly Dr. Elliotson was invited to bring the Okeys to Mr. Wakley's house in Bedford-square. This he did, and a few gentlemen were present to witness the experiments, to act as assessors as to the fairness or otherwise of the experiments, and to determine how far the results were satisfactory or the contrary. The "committee" consisted of Dr. Hennis Green, the late Mr. George Mills, Mr. Hale Thomson, Mr. (now Dr.) William Farr, Dr. F. Richardson, Mr. (now Dr.) W. Wood, and Mr. J. F. Clarke. We do not intend here to recapitulate all the experiments which were performed during a long and protracted investigation. Those who feel sufficient interest in the matter will find an elaborate report of the proceedings in the second volume of THE LANCET for the year 1837. Suffice it to say that they unequivocally proved that the effects said to be produced by mesmerised gold—that is, by sovereigns held for a certain time in the hands of the mesmeriser—on the mesmerised persons, were produced to an equal extent by sovereigns warmed by having been placed, without having been touched by the hand, under a jug of warm water. But the *experimentum crucis* is worthy of being reproduced. Dr. Elliotson, amongst other experiments, had tried the effects of "mesmerised nickel" on Elizabeth Okey; but the results had been so alarming that he requested Mr. Wakley to be exceedingly careful in his application of that metal. This was promised; and Mr. Wakley, having handed privately to Mr. Clarke a piece of pure nickel, procured from Gardener's of Oxford-street, proceeded to pass what was supposed to be the nickel over the hands of Okey. She soon began to be convulsed; and on Dr. Elliotson, in a voice of alarm, calling out "For God's sake, Mr. Wakley, be careful, or you will kill the girl," Okey became violently convulsed and opisthotonic. The experiment was concluded, and Dr. Elliotson claimed the result as proof of the mesmeric influence. Some excited discussion ensued, in which Dr. Elliotson repeatedly insisted that nothing but nickel would have produced the effects which had been witnessed. Mr. Wakley thereupon produced a mother-of-pearl button which he had substituted for the nickel, and called upon Mr. Clarke, who had been at the far end of a spacious room, to produce the nickel, which he did from his waistcoat pocket. The assembly broke up in tumult, but the result of the investigation was the discomfiture and downfall of mesmerism. Dr. Elliotson tendered his resignation as lecturer at the College and physician at the hospital. His resignation was accepted, notwithstanding a most numerous meeting of the students passed by a majority a resolution in support of their teacher; such, even under the unparalleled circumstances we have named, was the esteem and gratitude of his pupils. We have referred to the above circumstances at some length because they form one of the most remarkable chapters in modern history of medicine.

The subsequent career of Dr. Elliotson was one mainly in antagonism to his professional brethren. He continued to practise mesmerism. He founded an infirmary in which it should be employed. He edited *The Zoist*, a mesmeric publication, and refused to recant his opinions, which we believe he had always held honourably, and which he entertained to the last. He always contended that the effects produced by mesmerism had counterparts in nature—such as deep sleep, trance, and somnambulism. Dr. Elliotson was president for the usual term of the Royal Medical and Chirurgical Society, and permanent president of the Phrenological Society. He was the translator of "Blumenbach's Physiology," with new and copious notes; and he afterwards published a distinct work on physiology, in which he upheld mesmerism as worthy the name of a science. He also published his "Lectures on Medicine," which at the time were popular; but the work has been superseded by more modern productions. As a lecturer he was clear, concise, and painstaking. He never attempted to be oratorical or sensational; and was singularly free—mesmerism excepted—from speculative theories. As a clinical teacher he was in his time unrivaled. He did not *lecture*, but *taught*; and always held that it was the duty of an hospital physician to refer to every case under his care, as no two cases were precisely alike, and that a disease might be better studied in a number of graphic sketches from nature than in the exhibition of one "composition," however elaborate or however complete. As a practitioner he was remarkably accurate in his diagnosis. He was gifted with singular powers of observation, and was most laborious in his investigation; but in that part of practice which he sought to elevate—therapeutics—he was not so fortunate. It was a saying of his pupils: "Let the Doctor diagnose, but not treat the case." His prescriptions, it is true, were uncomplicated and simple; but he had an exaggerated confidence in the power of drugs.

Dr. Elliotson died on the 27th ult., at the house of Dr. Symes, in Davies-street, Berkeley-square. He had been long in a declining state of health; but within a few days of his death had sat up daily. The hot weather was too much for him, and he succumbed, conscious to the last, and peaceful in the hour of change. With the exception of Robert Grant, we believe he was the last of the great founders of that school which in its day had no compeer.

In person Dr. Elliotson was below the middle height; he had a large head, indicative of power, well-marked and energetic features, and prepossessing manners. He has been known to say he did not like his profession; but he pursued it, as he did everything he engaged in, consistently and energetically. He was highly endowed mentally, and was a good scholar, being well acquainted with ancient and modern languages. He was somewhat obstinate in his opinions, and had too firm a belief in what only appeared to be true. He has somewhat outlived the memory of the present race of medical practitioners; but he occupied in his day a most important position, and this he occupied worthily—he was entitled to it by his talents and acquirements. Whatever were his faults, and they were probably those due to an enthusiastic temperament, it must be admitted by all who regard his character without "favour or malevolence" that he was a remarkable man. He was an earnest reformer. He repudiated authority when it attempted to interfere with the progress of truth. He was in the front ranks of those who opposed monopoly, and was consistent in this at a time when that consistency would have been fatal to a man less able and courageous. The breath of slander had never ventured to attack his private character. If he made enemies, he had the happy power of conciliating and making friends; and thousands of the pupils whom he instructed, and whom he endeared to him by a genuine spirit of kindness, will do justice to his memory as to one of the foremost men of our time; while they cannot help lamenting the great error of his life, which casts a shadow over his monument, which without it would have been pure and unsullied.

* It is due to Dr. Elliotson to state that he attempted to explain every phenomenon on physiological grounds. Thus he considered that the "prophecy" of Elizabeth Okey was quite explicable on the assumption that her perceptive powers, which were undoubtedly acute, had detected the peculiar effluvium which surrounds the body of a person near death—an effluvium which in this instance was not perceptible to others.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows held on the 30th ult. the following gentlemen, having undergone the necessary examination, were duly admitted Members of the College:—

Moxey, David Anderson, M.D. Edin, Edinburgh House, Turnham-green.
Payne, Joseph Frank, M.B. Oxon., St. Mary's Hospital, Paddington.
Phillips, John Jones, M.D. Lond., Guy's Hospital.
Pigg, Thomas, M.D. St. Andrews, Manchester.
Rutter, Joseph, M.D. Lond., Brighton.
Wright, Robert Temple, M.D. Edin., New Ormond-street.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following members of the College, having passed the necessary examinations, were admitted Licentiates in Midwifery on the 3rd inst:—

Cartwright, J. A. T., Spalding.

Earle, Thomas A., Euston-road.
Gross, Samuel, Royal Marines, Woolwich.
Rix, C. J., Manchester.
Roberts, W. L., Spilsby.
Tearle, Francis Furlong, Exeter.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 23rd:—

Amsden, George, King's College Hospital.
Andrews, George, Sarsden, Chipping Norton.
Bate, George Paddock, Walton, Stone, Staffordshire.
Black, John Gordon, Newcastle-on-Tyne.
Blenkinsop, Frederick Henry, St. George's Hospital.
Brett, Francis Charles, Hal-ey-street, Cadogan-place.
Evans, Thomas Walter, Llanymawddwy, Merioneth.
Hallowes, Adolphus Henry Blackwood, Redhill, Surrey.
Laidler, Joseph, South Stockton-on-Tees.

On July 28th:—

Brocklehurst, Thomas Howard, Manchester.
Chabot, Herbert, Camberwell-road.
Chapman, John, Burlington-road, Bayswater.
Green, John, Dudley, Worcestershire.
Herbert, Samuel Lymas, Demerara.
Madsley, George Sherwin, Pelham-street, Brompton.
Taylor, John Richard Algernon, Infirmary, Halifax.
Wood, Charles, Welbeck-street.

The following gentlemen also on the same days passed their first examination:—

J. L. Bullock, University College Hospital; W. H. Pearce and W. D. Hyde, Charing-cross do.; W. E. Crowther, John Phillips, A. C. Roberts, J. D. Roberts, Guy's do; Charles Butler, St. Bartholomew's do.; J. A. Bell, St. Thomas's do.; H. J. Rope, King's College do.; George Robinson, London do; H. W. Boddy, Manchester School of Medicine.

TÆNIA SOLIUM AND RAW MEAT.—Dr. Pietro Grilli states, in *L'Imparziale*, that in the course of seven months, he came across seven cases of tænia, three of which were his own. The cases all referred to children who had partaken of raw meat. The author states that good mechanical or chemical means to destroy the cysticercus is as yet wanting. *Primâ facie* it would seem as if complete trituration might answer the purpose.

THYMIC ACID.—This acid, obtained from the essential oil of thym, has been proposed as a succedaneum of carbolic acid or creasote. It emits no disagreeable smell, and is powerfully antiseptic. Its composition is $C_{20}H_{14}O_2$. In a concentrated form it may take the place of nitrate of silver; and, as an antiseptic, it should be dissolved in 1000 parts of water, with the addition of a little alcohol.

COLUMBUS'S EGG.—M. Groussin mentions a fact of some interest in the *Tribune Médicale* of July 12th, to show how much simple means, untried before, may accomplish when all other measures have failed. A boy about nine years old had forced a steel ring on one of his fingers; all attempts at removal by filing, cutting, &c., having failed, in a village near Paris, the medical man advised the mother to go the next day to town, and apply at the Hôtel Dieu. The surgeon endeavoured to cut the ring in various ways, but the œdema was so great that he failed, and amputation of the finger was proposed. The mother left the place, and met a surgical instrument maker in the hall. The latter, having heard the nature of the case, asked her to come to his shop, where he placed the ring in a vice and broke it. Our first idea in these accidents is cutting and filing, but it is plain that well-regulated compression is more expeditious and effectual.

MEDICAL CHARITIES. — John Terrett, Esq., of Tewkesbury, left the residue of his property, amounting to about £13,000, to five trustees, upon trust after the death of his sister, for various charities in the town, including the dispensary and lying-in charity. On Miss Terrett's death, in 1866, it was found that the gift was defeated by the operation of the Mortmain Act, and that the money devolved to the Crown. The trustees therefore petitioned the Lords of the Treasury to recommend the Crown to grant the property to the trustees for the charitable purposes expressed in Mr. Terrett's will. Her Majesty has been pleased to make the grant, in compliance with the petition, and a scheme for the distribution of the charity has been approved by the present Attorney-General, which authorises the trustees to contribute £25 per annum to the Dispensary, which has already an income derived from previous gifts; £50 per annum to the Rural Hospital; and £40 per annum to the Lying-in Charity. The late Mr. Terrett also left a legacy of £500 to the Medical Benevolent Fund; £300 to the Asylum for the Blind at Edgbaston, near Birmingham; £500 to the Society for the Instruction of Deaf and Dumb Children, at Edgbaston; and £1000 to the Gloucester Infirmary.

MEDICAL APPOINTMENTS.

ATCHLEY, G. F., M.R.C.S.E., has been appointed Surgeon to the Bristol General Hospital, vice Clarke, resigned.
BALL, Dr. J. A., has been appointed a Visiting Surgeon to the Stockport Infirmary.
BOROUGH, E., L.R.C.P.Ed., M.R.C.S., late Senior Assistant House-Surgeon to the Leeds Dispensary, has been appointed House-Surgeon to the Leeds Fever Hospital, vice Mr. H. C. Libbey, resigned.
BURMAN, W. M., L.R.C.P.L., has been appointed Medical Officer for the Wath District of the Rotherham Union, Yorkshire, vice E. J. Syson, L.R.C.P.Ed., resigned.
CALDWELL, S. J. B., L.R.C.P.Ed., has been appointed Medical Officer for District No. 7 of the Parish of Liverpool, vice Steele, resigned.
CASEY, E., M.B., has been appointed Senior Assistant Medical Officer to the Gloucester County Lunatic Asylum, Wotton, vice John H. Simpson, L.R.C.P.L., resigned.
CLAPHAM, J., M.R.C.S.E., has been appointed Medical Officer for the Town District of the Soulcoates Union, Yorkshire, vice Preston, resigned.
CLARKE, W. M., M.R.C.S.E., has been appointed Honorary and Consulting Surgeon to the Bristol General Hospital, on resigning as Surgeon.
CURME, G., M.R.C.S.E., has been appointed Consulting Surgeon to the Dorset County Hospital, Dorchester, vice W. D. Tapp, F.R.C.S.E., resigned.
DEMPSEY, W. C., M.R.C.S.E., has been appointed Surgeon to several Friendly Societies at Oldbury.
DE ZOUCHE, L., M.D., has been appointed Medical Officer for District No. 6 of the Parish of Liverpool, vice Caldwell.
DUCAT, A. D., M.D., has been appointed Medical Officer for the Highbury and Canonbury District of the Parish of St. Mary, Islington, vice H. G. Shea, M.D., resigned.
EMSON, A., M.R.C.S.E., has been appointed a Surgeon to the Dorset County Hospital.
FRY, A. B., M.R.C.S.E., has been appointed Medical Officer for the Sandhurst District of the Easthampstead Union, Berks, vice W. Davies, M.R.C.S.E., resigned.
GENTLES, T. L., L.F.P. & S. Glas., has been appointed Medical Officer for the South District of the Derby Union, vice W. M. Bobart, M.R.C.S.E., deceased.
GOOD, Mr. G., has been appointed a Surgeon to the Dorset County Hospital.
HOGG, C. H. J., M.R.C.S.E., late Resident Surgeon to the Lying-in Hospital, Birmingham, has been appointed Resident Surgeon to the Children's Hospital, Birmingham, vice Mr. Horatio Wood, resigned.
KIDD, Dr., has been appointed additional Physician to the Westminster General Dispensary, Gerrard-street, Soho.
KNOTT, Mr., has been appointed House-Surgeon at St. Mark's Hospital, City-road, vice R. T. Grubb, M.R.C.S.E.
MALLORY, Mr., has been appointed House-Surgeon to the Stockport Infirmary, vice Ball, appointed a Visiting Surgeon.
MIDDLETON, W., jun., M.D., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Milltown Dispensary District of the Mullingar Union, Co. Westmeath, vice D. B. North, M.B., appointed to the Tyrrellspass Dispensary District.
MILLER, L., L.R.C.P.Ed., L.R.C.S.Ed., L.A.H.Dub., has been appointed Medical Officer for the Second District of the Melksham Union, Wilts, vice E. E. Meeres, M.D., resigned.
MURPHY, T. C., L.R.C.P.L., has been appointed House-Surgeon to the Royal Free Hospital, Gray's-inn-road.
PATCHETT, H., L.R.C.P.Ed., has been appointed Medical Officer for the Mellor District of the Blackburn Union, Lancashire.
ROBINSON, R. H., M.R.C.S.E., has been appointed Surgeon to the National Independent Order of Odd Fellows, Salford, vice Joseph Crighton, M.D., deceased.
SPENCER, T., M.R.C.S.E., has been appointed Medical Officer for the Desford District of the Market-Bosworth Union, Leicestershire, vice F. Green, L.R.C.P.Ed., resigned.
STEELE, W. S., M.R.C.S.E., has been appointed Medical Officer for the St. Mary Church District of the Newton-Abbot Union, Devon, vice J. Pollard, M.R.C.S.E., resigned.
STEWART, R. E., L.D.S.R.C.S.E., has been appointed Lecturer on Dental Mechanics at the Liverpool Royal Infirmary School of Medicine.
STOCK, Dr. W. H., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Crossmolina Dispensary District of the Ballina Union, Co. Mayo, vice E. C. Swayne, L.K.Q.C.P.I., resigned.
STONE, Dr. W. H., has been appointed Physician to the Westminster General Dispensary, Gerrard-street, Soho, vice E. Haward, M.D., resigned.
STURTON, H. W. S., M.R.C.S.E., late Resident Medical Officer to the Royal Kent Dispensary, has been appointed one of the Surgeons for Greenwich.

Births, Marriages, and Deaths.

BIRTHS.

BANNISTER.—On the 23rd ult., at Addison-terrace, Notting-hill, the wife of Dr. Bannister, of a son.
CUMMINS.—On the 30th ult., at Braintree, Essex, the wife of Henry Cummins, M.R.C.S.E., L.M., of a daughter.
DUKE.—On the 29th ult., at Lewisham, the wife of J. C. Duke, M.R.C.S.E., of a daughter.
EARLE.—On the 26th ult., at Boulogne-sur-Mer, the wife of F. J. Earle, M.D., Indian Army, prematurely of a daughter.
JOHNSON.—On the 25th ult., at Great Malvern, the wife of W. Johnson, M.B., of a son.
JONES.—On the 29th ult., at Carnarvon, the wife of R. A. Jones, M.R.C.S.E., prematurely of a daughter.
KOUGH.—On the 1st inst., at Bagshot, Surrey, the wife of Edward Kough, M.A., M.B., of a daughter.
LOW.—On the 31st ult., at Martley, near Worcester, the wife of W. C. Low, M.D., of a daughter.
NICHOL.—On the 30th ult., at Denmark-hill, the wife of R. Nichol, M.D., of a daughter.
SWALES.—On the 29th ult., at Sheerness, the wife of P. Swales, M.R.C.S.E., of a son.

MARRIAGES.

EDDOWES—HUMMEL.—On the 23rd ult., at Christ Church, Brixton, William Eddowes, Surgeon, of Shrewsbury, to Maria Lavinia, only daughter of Horace Morley Hummel, Esq., of Melbourne Lodge, Brixton.

FISHER—PHILSON.—At Glen Eden, Grafton-road, New Zealand, Robert Elliot Fisher, Resident Surgeon at the Lunatic Asylum, to Matilda Louisa, eldest daughter of Thomas Moore Philson, M.D., Provincial Surgeon and Coroner for the City of Auckland.

HEYGATE—HOLMES.—On the 30th ult., at St. Stephen's, South Kensington, William Nicholas Heygate, Esq., of Kilworth Beauchamp, Leicester, to Mary Ann, eldest daughter of the late Rayner Holmes, Esq.

DEATHS.

BLENNERHASSETT.—On the 28th ult., at Mount Rivers, Killorglin, Co. Kerry, Dr. R. H. Blennerhassett.

CLARK.—On the 1st inst., Henry Clark, L.F.P. & S. Glas., of London-road, Glasgow, aged 68.

MACKENZIE.—On the 30th ult., suddenly, at Oakfield-terrace, Glasgow, Wm. Mackenzie, M.D., Surgeon-Oculist to her Majesty.

MARSHALL.—On the 24th ult., S. Marshall, M.R.C.S.E., of Morningside, Old Trafford, Manchester, formerly of Wakefield, aged 85.

MELVIN.—On the 27th ult., at Warminster, Alex. Melvin, Inspector-General of Hospitals on half-pay, aged 75.

MILLER.—On the 29th ult., D. Miller, M.D., of Glasgow.

PHILLIPS.—On the 25th ult., John Phillips, F.R.C.S.E., of Bridgnorth, Salop.

SHAUL.—On the 24th ult., R. Shaul, Surgeon, of Dorking, Norfolk, aged 75.

Medical Diary of the Week.

Monday, Aug. 10.

ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 1½ P.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 11.

ROYAL FREE HOSPITAL.—Operations, 9 A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Wednesday, Aug. 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
OPHTHALMIC HOSPITAL, SOUTHWARK.—Operations, 2 P.M.

Thursday, Aug. 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Friday, Aug. 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL FREE HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 15.

ST. THOMAS'S HOSPITAL.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

To Correspondents.

A. B.—At the end of the contracts which were entered into by boards of guardians and public vaccinators is the following clause—viz., "Lastly, it is agreed that this contract may be put an end to by either of the parties hereto on giving twenty-eight days' notice in writing to the other party respectively of the intention to put an end to the same." This will clearly prove that the guardians have the power to put an end to the contract, that being one of the conditions of the contract. It is true that the Vaccination Act of 1867, which repeals former statutes, enacts that all contracts under the previous Acts "shall remain in as full force as if the same statutes had not been repealed;" but it does not take away from either of the contracting parties power to put an end to the contract by giving twenty-eight days' notice to the other party to the contract. The consent of a contractor to the annulment of a contract is not necessary, as after the twenty-eight days' notice has expired, the contract is *ipso facto* at an end.

THE POOR-LAW MEDICAL SERVICE.

WE have been requested to publish the enclosed important correspondence.

39, Sloane-street, 31st July, 1868.

DEAR SIR,—To my astonishment I see it stated in an address that you made at the meeting of the London and provincial Poor-law medical officers, held at the Freemasons' Tavern, that when the letter containing the recommendation of the Select Committee was read by the Clerk to the Weymouth Board of Guardians, Mr. Gulson, the Inspector, was present, and stated that the resolution was carried by a majority of *one* only, and *that the President of the Poor-law Board* voted *against it*; but that, as there was a majority in favour of it, the Poor-law Board were bound to issue the circular. You then ask what hope there was of any real reform whilst the permanent staff are permitted, *unchecked by their superiors*, to use their influence adversely to the interests of the sick poor and their attendants!

Now in this statement there must be some egregious mistake; for one of two things must have occurred—either that Mr. Gulson must have stated that for which there was not the most remote foundation, or that somebody must have misrepresented to you what passed at the time (when he is said to have spoken). Mr. Gulson knew that I was Chairman of this Committee, and could only have given a casting vote; and that had my opinion been adverse to the resolution, and I had been called upon to vote, that it would have been rejected; and had he inquired at the Office to learn my opinion on the subject, he would only have been told that I cordially approved of the medicines in question being supplied by the unions, and that I had even expressed impatience at the circular not having been issued sooner.

I have not yet communicated with Mr. Gulson, but will do so forthwith, as he, of course, cannot have seen the statement in question, or he would, I should suppose, have instantly given an emphatic contradiction to what he found to be so entirely at variance with the fact.

I remain, dear Sir, yours truly,

Dr. Rogers. C. P. VILLIERS.

Dean-street, Soho, W., July 31st, 1868.

DEAR SIR,—Your letter of this day's date, addressed to me at the Freemasons' Tavern, did not come to hand until the meeting was over, and therefore I was precluded from doing what I should have at once felt to be my duty, to read it to the meeting, and then and there given the authority upon which the statement was made. This I will now proceed to do.

I first heard it publicly made by Mr. R. Griffin, of Weymouth, at a meeting of Poor-law medical officers held in May or June, 1866, at the same place, and I confess to having been so much struck with it, that when arranging my notes for the aggregate meeting of medical officers on the 24th June last, I applied for and obtained my authority on which the statement was founded.

It is contained in a letter addressed by Mr. Griffin to the House of Commons, and may be found at the bottom of page 5 of the pamphlet I forward you. This letter was printed and circulated about two years ago; but as you left the Poor-law Board on or about that time, I can well understand that you would not be likely to have your attention drawn to what is there stated.

The quotation contained in my speech, you will perceive from the condensed report of it I also forward you, is copied correctly from the pamphlet, and you will see that it was followed by the subjoined reference to yourself:—

"Who if he did not vote against it, must have been led to do so by bad advice from his official surroundings; for a gentleman whose name stands so honourably distinguished for his persistent efforts in conjunction with Cobden and Bright in procuring the cheap loaf for the labouring man would not knowingly do an unjust or unkind thing, and, looking at the high character of the man, I could hardly believe it to be true."

My justification for referring to the statement is that it had been in print so long, and the accuracy of it had never to my knowledge been impugned, and that it was not inconsistent with the action of many of the members of the permanent staff of the Poor-law Board in their official dealings with Poor-law medical officers, to which class, as I presume you are aware, I recently belonged, and whose interests and those they wait on it is my intention, now that I have nothing further to fear from the hostility of the Board, to exert myself to the best of my ability publicly to benefit.

I can assure you I much regret having given you one moment's annoyance by my quotation, and I have also to express the satisfaction that will be felt by my professional brethren when they learn that you advocated the desirability of expensive medicines being supplied by unions, and that you were impatient that the circular letter containing the Committee's recommendation was not sooner issued.

This indifference to a much-needed reform on the part of the permanent officials, coupled with many other facts, will intensify the feeling now extensively and widely believed in by many intelligent observers, that a recast of the office is a necessity if the central machinery is to work harmoniously and beneficially for the public good.

As it is arranged that a report of the late meeting on the 24th should be sent to every union and district in England and Wales, as well as to influential noblemen, members of the House of Commons, and others, I think it but just to you that I should forward this correspondence to the papers, unless I hear from you to the contrary.

I am, dear Sir, yours respectfully,

JOSEPH ROGERS,
President of the Poor-law Medical Officers' Association.

The Right Hon. C. P. Villiers, M.P.

I subjoin the statement which Mr. Gulson, on good authority, is asserted to have made:—

This resolution has been attempted to be carried out by a circular letter from the Poor-law Board to the Boards of Guardians; and when the circular was under consideration at the Weymouth Union, a Poor-law Inspector, Mr. Gulson, who was present at the meeting, stated "that the resolution of the Select Committee on Poor Relief on this question was only carried by a majority of one, and that the President of the Poor-law Board voted against it; but as there was a majority in favour of it, the Poor-law Board was bound to issue the circular letter." He also spoke against expensive medicines being found. The result was that the guardians decided on leaving things as they are; consequently the poor of Weymouth still go on as before, and such I understand is the case in many unions, and no wonder if Poor-law Inspectors be allowed to speak against the letters of the Poor-law Board itself.—*p. 5.*

THE SUPPOSED VISITATION OF MOSQUITOES.

OUR readers will remember that we expressed a strong doubt as to the insects, the presence of which had been so much written about, being veritable mosquitoes. We declared those which we had seen to be gnats; whereupon some of our correspondents favoured us with specimens, in order to convince us of the identity of the English with the foreign variety. We have since examined these specimens with the aid of a microscope, and consider them to belong to the gnat genus. The mosquito of warm places is, according to some entomologists, merely a variety of that insect. It is well known that the whole tribe are readily developed in moist and marshy places and in little pools of stagnant water during the heat of the summer, and the present year has been remarkably favourable to them. In the earlier stages of their existence they dwell in water, where they can be readily discovered. After undergoing some metamorphoses, they finally assume the insect form, developing wings at the same time that they acquire their weapons of offence, and their propensity, like the giants in children's story-books, to "smell the blood of an Englishman;" only they are without the giant's gallantry, inasmuch as they rather prefer the blood of an Englishwoman or that of her children.

Mr. J. Thompson can carry on the business he contemplates doing, but must register before 31st December next.

Rusticus.—We believe that the Society has ceased to exist.

THE EDINBURGH AND ST. ANDREWS UNIVERSITY ELECTION.

THE following circular has been sent to all the graduates of Edinburgh and St. Andrews:—

8, St. Andrew-square, Edinburgh, 1st August, 1868.

SIR,—Having learned that the friends of Mr. Campbell Swinton are circulating a printed paper calculated to represent Dr. Lyon Playfair as devoid of interest in the medical profession, we think it right to counteract the impression that may thus have been produced, by stating that, having had a regular and complete medical education, and been long associated with members of the profession in the discharge of public duty, Dr. Playfair perfectly understands their feelings, and cordially sympathises with them in their wants and wishes. We enclose a form which will give you an opportunity of joining with us in promoting his return as member for the Universities of Edinburgh and St. Andrews.

Sir, we have the honour to be, your faithful servants,

JAMES SYME, President of General Committee,
Professor of Clinical Surgery, University, Edinburgh.
OSWALD H. BELL,
Professor of Medicine, University, St. Andrews.
DOUGLAS MACLAGAN,
Professor of Medical Jurisprudence, University, Edinburgh.
J. Y. SIMPSON,
Professor of Midwifery, University, Edinburgh.

To the Editor of THE LANCET.

SIR,—I observe in THE LANCET of the 1st instant the statement that "Sir James Simpson's name was introduced without his authority into the Campbell Swinton's Committee List," as advertised in your journal.

Being responsible for the preparation of the advertisement in question, I take the liberty of pointing out that it was *not* an advertisement of Mr. Swinton's Committee, and that Sir James Simpson's name was *not* inserted therein as a member of that Committee, but merely as one of those who had "declared their intention of supporting Mr. Campbell Swinton." For the fact of Sir James having declared this intention, I had the authority of his written promise.

It may, however, save further correspondence if I mention that, *since the date of the advertisement referred to*, Sir James Simpson has, by his own request, been released from that promise.

I am, Sir, your obedient servant,

J. A. STORMOUTH DARLING,
Secretary to the Campbell Swinton Committee.

Edinburgh, August 5th, 1868.

New Swindon.—The case referred to as having been "cured" by certain "mesmeric" passes made by the Rev. Mr. Young, the Unitarian minister, is of no extraordinary kind. The effects of the imagination on disease are well known, and illustrations of these effects are to be found in the records of all ages.

Mr. M. Hennessy is thanked for the expressions contained in his note.

MILK AS A REMEDY FOR DIARRHŒA.

To the Editor of THE LANCET.

SIR,—The correspondent who a week or two ago wrote to you to suggest the above remedy for diarrhœa, concluded his letter by saying that it would "deserve inquiry whether the milk should be boiled and allowed to become sufficiently cool to swallow, or whether it should only be made warm." As I do not find the subject taken up by other correspondents, I beg to offer a few words upon the question of boiled milk; for I consider it of the greatest importance, especially in the case of children, that the milk should not be boiled. I believe that it can be borne by few stomachs. It is frequently rejected, and when retained it is likely otherwise to disagree. This is my experience, and the intolerance of boiled milk occurs in too many instances to admit of an explanation on the score of individual idiosyncrasy. I should like to know in what manner science can account for the fact. In the meantime I may perhaps hazard an opinion, and it is this. It may be that the milk, when subjected to the action of a high degree of heat—a temperature approaching to the boiling point,—undergoes a chemical change, which causes the separation of the solids and fluids, and the casein thus becomes coagulable and indigestible.

This is a subject worthy of the attention of those of your readers who are interesting themselves in questions relating to infant dietetics as a means of preventing excessive mortality from diarrhœa and other infantile disorders, consequent upon injudicious feeding and defective alimentation.

I am, Sir, yours obediently,

July, 1868. M. A. B.

Dr. James M'Nee.—We sympathise with our correspondent in the eighteen months of care which he has had in consequence of doing what he thought to be his duty in the case of Catherine Fraser. At the same time we are not able to approve all his behaviour. He should have kept his first promises to examine the girl, and this ought to have been done in the presence of a third party, to whom the real state of the case should have been explained. We need not say of how much use a witness like this would have been in any view of the case; nor are we of opinion that it was any part of Dr. M'Nee's duty to presume concealment of pregnancy, and use his professional knowledge to initiate legal proceedings against a person who had consulted him professionally. Surely a medical man is not to be the accuser of his patients, and to volunteer information which comes to him professionally. Doubtless he may be required to divulge information at the stern demand of justice; but that he should presume the worst construction of facts, and go out of his way to qualify himself for initiating serious charges against a patient, is a view of medical duty which at present does not commend itself to our approval. We gather from Dr. M'Nee's own letter that he was too careful about his own reputation in the matter, too sensitive as to what the public would say.

A Sufferer should consult some respectable surgeon in his own neighbourhood.

Experientia Docet.—If he is not on the Register, he cannot recover his charge in a court of law.

A CORRESPONDENT notices that Dr. Bennet's description in his Corsican Notes of the conditions inducing malaria are those *first* laid down and *positively* proved by the late Dr. Ferguson, of the Peninsular army. (*Vide* Watson, and Trans. Roy. Soc. Ed.)

Mr. W. H. Strange.—The case shall be inserted in an early number of THE LANCET.

G. B.—A person can register who has acted as assistant for three years, and passed a modified examination previous to 31st December next.

ARMY MEDICAL OFFICERS' UNIFORM.

To the Editor of THE LANCET.

SIR,—We are told in the columns of the military papers that sundry changes are about to take place in the infantry uniform. For a long time medical officers of the army have wished that the present black belts, while retaining their distinctive colour, might be changed in material, and suitably ornamented.

In the navy and continental armies, medical officers wear belts of a kind of dull silk, with a double row of gold lace. The medical is the only corps in the service in which officers of a higher grade wear belts differing from the juniors. Why should it be so?

Medical officers might also be permitted to wear the head-dress of their respective corps. If the medical chiefs pressed these changes on the authorities, they would almost certainly be granted. An agitation to this effect took place some two years ago at Netley, and drawings of belts were actually sent to the War Office.

Would you kindly give your powerful aid to sweeping away this almost last grievance of your brethren in the army?

Yours obediently,

August, 1868. A STAFF ASSISTANT-SURGEON.

Dr. Sheen.—The advertisement of the Leicester Board of Guardians is for an officer to carry out the provisions of the Vaccination Act, not to vaccinate. His duty will be to see that the children are properly vaccinated, and to prosecute the parents who neglect to have it done. The rate of payment is therefore unobjectionable.

Mr. R. C. Croft should apply at Scotland-yard.

Mr. G. C. Knight.—The cases are too numerous to quote. If our correspondent will forward to us the nature of his claim, &c., we will endeavour to assist him.

Dr. A. Kingdon.—We have directed attention to the point mentioned by our correspondent.

Quo Pronunt, &c.—There is a doubt on the question. Different judgments have been given by magistrates. The judges have not yet decided the point.

F. Z. S., (Manchester.)—Owens College is not mentioned in the list published by the Royal College of Surgeons of England.

L. F. P. S.—It is not strictly *legal*; but the Medical Act is so indefinite that it is probable a conviction could not be obtained.

J. H.—There is no specified qualification for the office, which is in the gift of the President of the Poor-law Board.

J. H. B. cannot register unless he obtained a license or diploma after examination. The case referred to was of a totally different kind.

Mr. W. Philson, (Cheltenham.)—The notice shall be inserted.

THE ST. ANDREWS MEDICAL GRADUATES' ASSOCIATION.

To the Editor of THE LANCET.

SIR,—I am obliged by the correction in last week's LANCET respecting the notice of the General Session of the St. Andrews Medical Graduates' Association. I must, however, in a matter so important ask you to allow me to state that the circular convening the meeting, not only was sent to every member of the Association, but that to make the meeting more widely known, every daily paper in London, as well as the medical papers, was apprised of it. The fact that THE LANCET had no intimation of the meeting, I cannot understand or explain. I can only say that I forwarded the same intimation to it as to the other medical papers, together with an invitation to the representative of THE LANCET for the country excursion of the Association on the day following.

Yours faithfully,

LEONARD W. SEDGWICK,
Hon. Sec. St. Andrews Medical Graduates' Association.

Gloucester-terrace, Aug. 4th, 1868.

THE space occupied by the addresses of Drs. Gull and Rolleston, and the report of the proceedings of the meeting of the British Medical Association, obliges us to postpone until next week the concluding paper of Dr. C. J. B. Williams; Dr. Mackintosh's interesting report of an Operation for Strangulated Hernia; Mr. Ogilesby's paper on Recovery of Sight after Atrophy of the Optic Discs; and other important communications.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

To the Editor of THE LANCET.

SIR,—As long as Mr. Fleischmann keeps within the region of plain facts I shall ever be prepared to meet him; but I really have not the time, nor indeed have I the inclination, to tilt a lance against the hand whose inspiration and impress are so evident in the answer before me.

My letter has palpably hit the right nail on the head. I was unfortunately necessitated to allude to personalities, the case in point being one link in my chain of argument. Private grievances have, however, been sufficiently ventilated. Nor does it at all affect the question whether this or that Association is more or less patronised by so and-so, my Lords spiritual and temporal. The gravamen of my charge is simply this: recent agitation has done more harm than good to the Poor-law medical officers. *Ergo*, shall they continue their blind confidence in, and fawning attachment to, those pursuing the devious path?

Mr. Fleischmann respecting himself delicately puts it, of having fought, "and in the fight been wounded." By one at least of his brethren, I hesitate not to say that he has been made a complete catspaw of, and has of a necessity had his fingers burnt. Being made the ladder whereon others could gain an ascendancy, he has been ruthlessly kicked down when the height was attained. *Ex uno disce omnes.*

The seven hundred medical officers of the several workhouses have, as a sequence to recent agitation, and as a consequence of this new-born regard for the sick poor, had unceremoniously imposed upon them additional unpaid labours, which, if faithfully performed, will of a surety bring the said officers into constant collision with the prejudices and parsimonies of their respective local boards. The whole body of medical officers is threatened with a direct appeal to an increased expenditure out of present most inadequate salaries. For the niggardly pay of one, the executive, pandering to the popular cry, endeavours to get the time and services of two legally-qualified attendants for every pauper sick. Furthermore, and this is a very serious point, the medical officers have been entirely alienated from the one supreme authority, whose protection they confidently relied on to counterpoise the petty jealousies and obstructiveness around them. Let any (metropolitan) medical officer now appeal to the Poor-law Board for an augmented remuneration, and he will quickly be made to understand the cautiousness and reserve of increased centralisation. Others than the medical officers have already alike experienced the sandy treacherousness of Mr. Hardy's Common Poor Fund. Finally, Gwydyr House is to us at this time a shut portal. We are by its edicts debarred from collectively and respectfully bringing our grievances "betwixt the wind and its nobility."

These are stubborn sequent, and, as I maintain, consequent facts. As a *per contra*, Mr. Fleischmann, with an ignorance pardonable in himself, parades certain "direct benefits" attributable to the representations of the bodies he names. I beg to remind the phraseologist of this cleverly-worded paragraph that a deeper study of the history of this now nearly forty years' agitation ought to have deterred even him from "solely" accrediting modern reactionists with the idea of medicines being provided apart from the salaries of the attendants. The Blue-books, more especially those of 1854 and 1861-2, contravene such an assumption. Can he also expect anyone, with a kindly remembrance and appreciation of the labours of those gone before, to patiently acknowledge the application of the term "pioneers" to recent innovators? But to facts. I have shown that, sequently to recent agitation, the medical officers of at least seven hundred union workhouses have, by an augmentation of their work, had their salaries of course proportionately and indirectly reduced. Can Mr. Fleischmann instance the one-hundredth part of this number of unions where any one medical officer thereof has, in consequence of Mr. Hardy's Permissive Act, had his medicines provided for him without a reduction of his salary? Your Commissioner, in his article this day on Out-door Relief, gives a total of only three such unions. At this rate of reception, it will take about six-and-twenty years to mete out to the medical officers of the thirty-eight metropolitan unions the "direct benefits" of Mr. Hardy's Bill. The correspondence of the Poor-law Board respectively with the guardians of the East London Union and of Kensington renders even these tardy benefactions extremely problematical. At all events, a reference to this correspondence would surely have restrained the over-confidence expressed in the concluding words of Mr. Fleischmann's first assertion.

To one other fact in this gentleman's letter I must only passingly and briefly allude. To a provincial resident, the non-appearance of a report "in *The Times* and leading journals" must sadly blast the reputation and respectability of any proceeding. The cessation of the apparent anomaly is well known. *Verb. sap. est.* We in this little village can afford to laugh at back-stairs influence.

The Poor-law Medical Officers' Association is at all events now an established fact, and it will not, I hope, be ever taunted with being "an echo—a mere echo." It was resolved on the 31st ultimo to restrict the objects thereof "more than heretofore, to matters directly affecting the welfare and the interests of the medical officers." Over 300 passengers had already entrusted their common cause to the "inferior drivers" of this "inferior engine"!

That a recognition of the special grievances of the medical officers is the primary and not the secondary desideratum of any properly-framed plan of Poor-law medical reform; that, reversely to certain ideas, this question is the major and not the minor premiss—is not the sullen and selfish ignorance of the interested. It is the matured and expressed opinion of the Poor-law Board itself. In an instructional letter therefrom, dated March 12th, 1842, occurs this statement:—"It is the earnest wish of the Commissioners to carry into effect the recommendation of the Committee of 1838, '*that the remuneration of medical officers shall be such as to insure proper attention and the best medicines, and the guardians will, doubtless, perceive that, unless the medical officer be adequately remunerated, no vigilance on their part will suffice to secure a proper attendance and medicines to the poor under their care.*'"

Thirty years have not affected the significancy of these words. It behoves all would-be Poor-law reformers, when agitating for additional supposed safeguards to the welfare of the sick poor, to weigh well the language of this instruction.

In this my reply I have endeavoured as much as possible to avoid combating mere opinions. I have marshaled and detailed incontrovertible facts in opposition to sophistry and blandishments. I have raised my warning voice, and it must now rest with the Poor-law medical officers, having before them the elements of judgment, to elect their own platform of action. Shall they (adopting the phrases of the *Poor-Law Chronicle* of the 7th ultimo) jealously preserve their own independence, or shall they allow themselves "to be swaddled in baby-clothes by the Workhouse Infirmaries' Association or the *British Medical Journal*"?

Your obedient servant,
ROBERT FOWLER, M.D.,
District Medical Officer of the East London Union.

Bishopsgate-street Without, August 1st, 1868.

P.S.—In any future communication on this subject, I trust Mr. Fleischmann will alter the irrelevant title of his letter. I believe the whole Poor-law body has "full confidence in the labours of your Commission," which is working out the delicate and complex problem of out-door relief in a very admirable manner.

COMMUNICATIONS, LETTERS, &c., have been received from — Prof. Maclean, Notley; Mr. Erichsen; Dr. Henry Bennet; Prof. Gamgee; Mr. Henry Lee; Dr. S. Ward; Surgeon-Major Wyatt; Dr. T. K. Chambers; Dr. Thudichum; Dr. Hilton Fagge; Dr. Beale; Dr. Humphry, Cambridge; Dr. B. Hicks; Mr. Shillitoe; Dr. George Johnson; Dr. Protheroe Smith; Dr. Devereux; Mr. Hutchinson; Dr. Sansom; Mr. Sydney Jones; Dr. Lory Marsh, Nottingham; Mr. Ashton; Dr. Sloane, New York; Dr. Rogers; Dr. Sedgwick; Mr. Nowell; Dr. Bruce, Winchester; Dr. Gillam; Mr. Norris, Tenbury; Dr. Barnes; Mr. Swinstone; Dr. M'Donald, Haswell; Dr. Martin, Oxford; Mr. Thomas; Mr. Toller; Mr. Fowke, Birkenhead; Mr. Lindon, Dublin; Dr. Low, Martley; Mr. Nicholson; Mr. Walker; Dr. Wood; Mr. Graham, Dublin; Mr. Yeld; Mr. King; Dr. Mayers, Bonn; Mr. B. Smith, Halifax; Mr. Macrae; Mr. Hennessy, Durham; Mr. Weale, Gloucester; Mr. Horton, Allerton; Dr. Turnbull; Dr. Woodward, Worcester; Mr. Doidge, Lifton; Dr. Mackintosh; Mr. Hilliard, Birmingham; Mr. Darling, Edinburgh; Mr. J. Jones; Mr. Cottle; Rev. A. D'Orsey; Dr. H. Strange; Mr. J. Hunt; Dr. Wale; Mr. J. Thompson; Dr. Hardwicke; Mr. Wilkinson, Dereham; Mr. Philson; Dr. Casey, Leeds; Dr. Commins, Braintree; Mr. J. Rowland; Dr. Wrangham, Wragby; Dr. Chapman, Biarritz; Mr. Fennell, Manchester; Dr. Wiltshire; Dr. Hovell; Dr. Hicks, St. Davids; Dr. Parkinson; Mr. Bourner, Barmouth; Dr. Allbutt; Dr. Sheen, Cardiff; Mr. Cresswell, Dowlais; Mr. Slade; Dr. Miller, Melksham Dr. Duncan; Mr. Robinson; Dr. Braithwaite; Dr. Kidd, Dublin; Dr. Mouat, Darjeeling; Dr. Wookes, Luton; Mr. Southam, Manchester; Mr. Hunt; Dr. Fowler; Mr. M'Leod; Dr. Keogh, Bagshot; Dr. Mackenzie, Glasgow; Mr. Adams, Maidstone; Rev. E. Bartrum, Berkhampstead; Dr. Oppert; Dr. Taylor, Nottingham; Dr. Eade, Norwich; Mr. Davies; Dr. Wilson, Alton; Mr. Jackson, Wolverhampton; Mr. Knight; Mr. Jordan; Mr. C. Lewis; Dr. Dewar, Arbroath; Dr. Heslop, Birmingham; Mr. Wilkins; Mr. Philp; Dr. Gaw; Mr. G. May, Reading; Dr. Malton; Mr. Nunneley, Leeds; Dr. M'Donnell; Mr. Holmes; Dr. Lawton; Mr. Ward; Mr. T. Smith; Mr. King, Alton; Mr Eddowes, Harrogate; Dr. Kennedy, Dublin; Mr. Morrison, Spalding; Mr. Richard; Mr. Jones, Exeter; Dr. Todd; Mr. Wright; Mr. Young; Rev. E. Bartrum; Dr. Oswald; Mr. Gittens; Mr. Denne, Winslow; Mr. Livingstone; J. B.; The Secretary of the Faculty of Physicians and Surgeons of Glasgow; &c.

The Times, the *Midland Counties Herald*, the *Broad Arrow*, the *Newcastle Daily Journal*, the *Surrey Times*, the *Bucks Herald*, the *Dundee Advertiser*, the *Edinburgh Daily Review*, the *Irish Times*, and the *Lincolnshire Chronicle* have been received.

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